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Responsible Invstor is published by:
Response Global Media Limited
100 Wood Street
London EC2V 7AN

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FOREWORD

STRUCTURAL CHANGE AND KEY CHALLENGES FOR FINANCIAL INSTITUTIONS

The Paris Agreement aims to hold the increase in global warming to well below 2°C and to pursue efforts to limit warming to 1.5°C. This means that we need to achieve global net zero carbon emissions by 2050, assuming we all act early and decisively to reduce emissions.

To achieve this the Paris Agreement creates a framework for mobilising commitments to tackle climate change from both state and non-state actors. State actors being countries and governments that are Parties to the Paris Agreement. Non-state actors are companies, financial institutions, civil society, and sub-national governments, such as states, provinces, and cities. While non-state actors are not Parties to the Paris Agreement themselves, their role is essential.
Paris creates a framework for transparency and a ratchet mechanism for country ambition. Glasgow is the first such ratchet opportunity, where Nationally Determined Contributions (NDCs) (UN speak for country climate targets), first set around 5 years ago can be revised upwards. Many countries, including the UK, have already significantly enhanced their NDCs ahead of Glasgow and many others will do the same. These collective commitments need to add up to well below 2°C. They don't currently. So a central objective of the UK Presidency is to get NDCs to be as ambitious as possible to close the gap and keep the goals of the Paris Agreement alive.

To achieve greater ambition, this COP will also focus on how to rapidly accelerate action from non-state actors, especially from the financial sector. We need new commitments at COP26 that amount to the most significant ever from financial institutions on climate, that demonstrate the collective intent for massive material change in future financial flows, and the widespread adoption of financial practices that actively support the transition to net zero at the pace and scale required.

In a similar way to how governments make NDCs, financial institutions (as well as companies and other non-state actors) will increasingly be expected to make Paris-aligned commitments, with regular opportunities for ratcheting ambition and the annual reporting of progress.

This 'pledge and review' for non-state actors, as well as governments, will allow everyone to see who is making contributions and will help increase ambition and confidence in individual and collective efforts to tackle climate change. This will help to formalise and turbocharge a virtuous cycle in the climate process that started at COP21 in Paris: the growing role of financial institutions and companies, as well as states, regions, and cities.

The multiple, concurrent, and interconnected drivers of sustainable finance aren't going away. The international climate process embodied by COP26 is one of these key drivers and one that will continue to drive political, regulatory, and societal action to green the global financial system.

As a result, financial institutions will need to get much better at measuring climate-related risks and opportunities using new datasets, analytical approaches, and growing experience to do so meaningfully. Portfolios will need to capture client preferences to make a positive difference and turn that into reality by understanding what Paris alignment means and executing it, including through new investment strategies and effective engagement with investee companies. New approaches will also be needed to efficiently finance infrastructure and business models at the scale required to deliver net zero emissions globally.

These are just some of the key challenges financial institutions will need to grapple with quickly over the coming years to be successful and to help accelerate the positive changes already underway.

Sustainable finance is a structural change in both the demand and provision of financial products and services with wide ranging implications for financial institutions and the financial system. When we look back decades from now, we'll see Glasgow as the end of the beginning of this structural transformation in finance and financial services. There remains a very long way still to go, but the industry, together with governments, its supervisory authorities and its clients, increasingly know the scale of the challenge and why this is a necessary condition to tackle climate change and the other profound environmental challenges facing humanity.

Dr Ben Caldecott is Director of the Oxford Sustainable Finance Group and the Lombard Odier Associate Professor of Sustainable Finance at the University of Oxford. He is also Director of the new UK Centre for Greening Finance & Investment and since 2019 has been seconded to the UK Cabinet Office as the COP26 Strategy Advisor for Finance.

CODE RED: A CALL TO ACTION FOR RESPONSIBLE INVESTMENT

Fiona Reynolds, *CEO, Principles for Responsible Investment*

When I look back over the past year, to when the COP26 summit was originally meant to take place, there can be no denying that the sense of urgency on climate change has escalated to unprecedented levels.

In August, the Intergovernmental Panel on Climate Change (IPCC) released their new assessment on the climate science, in what the UN Secretary General António Guterres called a 'code red for humanity.' If it wasn't already obvious, the report left us in no doubt; the science couldn't be clearer for the entire globe, including the investment community—human-induced climate change is indisputable. Climate change is affecting every region on our planet, every investment in our portfolios and strong, rapid reductions in greenhouse gas emissions are needed to curb global warming.

The warning signs are more than apparent—in the lethal storms, heatwaves and floods that we've seen in recent weeks and months. What matters now is how fast we can all act, collectively.

What we need to achieve at COP26

In what will be the most decisive decade for the future of the planet, the goalposts are clear for the COP26 summit. If it is to be successful, we need to secure global net zero commitments by mid-century and keep 1.5C within reach. In response to this, countries, investors and business are being asked to come forward with ambitious 2030 emissions reduction targets.

Adaptation and resilience to protect communities and natural habitats will be another key component, including protecting and restoring ecosystems, building defences, warning systems and resilient infrastructure and agriculture to avoid loss of homes and livelihoods.

Critically, we need to mobilise finance and align all financial flows with the goals of the Paris Agreement. We also must seek to finalise the Paris Rulebook, which outlines rules for putting the Paris agreement into action.

PRI and COP26

There is no doubt that the task at hand is significant, but we must rally together to find solutions for the climate crisis before it's too late. That's why this year at COP26, the PRI is prioritising bold action. We are calling on governments, investors and businesses to take swift and meaningful steps towards zero emissions goals.

As they currently stand, emission reduction pledges put the world on course for a 3-to-4-degree temperature rise, which will plunge ecosystems into unprecedented chaos. Now, more than ever, governments and the private sector need to come together to commit to halving global emissions from current levels by 2030 to put the world back on track for 1.5 degrees.

It is highly possible that deforestation will prevent the world from meeting the Paris Agreement target of limiting the increase in global temperature to 1.5C. Over half of global GDP is covered by a national net-zero target, yet it is questionable whether any of these targets will be met without significant progress on deforestation.

Deforestation is a systemic risk that needs to move from individual to collective action. At PRI we are doing our part to tackle deforestation in our Practitioners Group, where decision makers from 45 investors (asset owners and asset managers), representing 18 countries with $29 trillion of AUM, discuss how to align policies, metrics, practices and engagement targets and strategies.

We are also working closely with partners in the Glasgow Finance Sector Alliance for Net Zero (GFANZ) and other networks to enable all PRI signatories to walk the talk on making a net zero carbon emissions economy a reality.

Over the coming months, the PRI's work will focus on convening government leaders and investors on ambitious, actionable climate targets in line with the 1.5 degree warming goals of the Paris Agreement.

Government action

We urge governments to acknowledge the need for a whole-of-government, economy-wide transformation, and not separate climate workstreams. We need policy reforms designed to support investors (and more broadly, financial institutions) to account for and manage the impacts of their investment and financing decisions.

The landmark Legal Framework for Impact report, commissioned by the PRI, UNEP FI and the Generation Foundation, found that across 11 jurisdictions, investors are usually permitted and sometimes required to pursue sustainability goals, in parallel to financial returns, when such goals are instrumental in achieving financial returns.

All investments have outcomes, positive or negative, intentional or unintentional. However, a lack of clarity in legal and policy frameworks, and prevailing market theories and practices, have led to many investors considering financial returns as their only goal. To amend this behaviour, and facilitate investing for sustainability impact at scale, we need to reform legal and policy rules to clarify and change the scope and interpretation of investors' duties and discretions and the circumstances in which they are applied.

In our recent PRI briefing we also provide recommendations for policymakers to support ambitious commitments across government and take decisive action at COP26, to deliver the emissions cuts needed this decade and a net-zero economy by 2050.

Investor action

In the spirit of collaboration, we are encouraging PRI signatories to work together on several initiatives, including the UN-convened Net Zero Asset Owner Alliance 2025 target-setting protocol which explicitly sets out how individual members will set a net zero target, achievable in the next five years, in addition to the Net Zero Asset Managers initiative. Opportunities for other financial sector actors include the Net Zero Insurance Alliance statement of commitment and Net Zero Banking Alliance commitment statement.

Global investor collaborations such as Climate Action 100+ include a corporate net zero benchmark, and investors can also sign on to the Global Investor Statement on Governments on the Climate Crisis, as coordinated by the Investor Agenda, which already represents 487 investors ($46 trillion in AUM - representing 40% of global AUM).

Through public annual reporting on progress, we encourage investors to enhance their accountability. Safeguarding against greenwashing will also be increasingly necessary in the future to retain credibility.

It is also imperative that public and private finance work together to turn billions into trillions to accelerate the climate transition. The collective target is $100 billion of climate finance annually for the mitigation and adaptation of climate risk. Blended finance - the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries – will play a key role in this. If blended finance structures do not exist or aren't adequate, we will not see any scaling up as the risk/return profile may not be sufficient for institutional investors. Now is the time for governments and investors to come together and tackle one of our greatest challenges. The future depends on actionable steps taken now to guarantee the livelihoods of future generations and the continued prosperity of our financial markets. We at the PRI are ready to work with all actors to step up our collective climate ambition and we hope you will join us on our mission. We will go further, faster, together.

> We need to reform legal and policy rules to clarify and change the scope and interpretation of investors' duties and discretions and the circumstances in which they are applied.

WHAT TO EXPECT AND HOW CAN INVESTORS ENGAGE?

Stephanie Pfeifer, *Chief Executive Officer at the Institutional Investors Group on Climate Change (IIGCC)*

Against a backdrop of increasing focus on climate-related issues, the 2021 United Nations Climate Change Conference – COP26 – is set to be a landmark moment on the path towards tackling climate change. It comes following the IPCC's Sixth Assessment Report on Climate Change, which highlighted that global warming is expected to exceed 1.5°C within 20 years and at a time when much of the world has been experiencing the physical impacts of a changing climate. Europe, Australia, and India have been affected by wildfires and floods over the last few months, highlighting the importance of taking urgent action. There has also been an unprecedented level of climate commitments from companies, investors and governments recently, which continues to grow.

In that context, COP26 is expected to be one of the most significant since the Paris Agreement came into place, with stakes and expectations higher than in any year since 2015. It is the first deadline for countries to submit updated NDCs since the Paris Agreement came into place and will be a notable opportunity for them to collectively strengthen their ambition. It will also be a COP like no other due to the ongoing impacts of the Covid-19 pandemic – this is coming through in the physical preparations, but also in the fiscal constraints and pressure on social welfare systems that make it more important than ever that the outcomes recognise the need for a sustainable and climate resilient economic recovery.

All of this begs the question: what should investors be expecting – and what role can they play as we head towards this critical moment?

What to expect from COP26

In terms of negotiations, the UK Presidency has set out several priority topics, which will shape much of the agenda across the two weeks. These include:

- the 'Paris Rulebook' – a set of common timeframes and formats for countries reporting on implementation of the 2015 agreement
- progress towards adaptation goals and increasing adaptation finance
- activities to address loss and damage associated with the impacts of climate change
- setting out a delivery plan for the goal to mobilise USD 100 billion per year of climate finance, with the intention of surpassing the target in 2021 and future years
- responding to gaps in the collective ambition demonstrated in countries' NDCs
- enhancing collaboration between governments and other parties on inclusive action

> Investors will play a crucial role, both in the run up to and during COP26, particularly in the context of finance being one of the priority negotiation topics.

In addition to this, meetings leading up to COP26 have highlighted a number of themes and issues that will also likely form part of the discussion on the side lines. These include the phase-out of coal and other sector-level policy commitments, commitments to mandate TCFD-aligned reporting and commitments in relation to deforestation.

Whether COP26 is considered to be a success will depend on several factors. Any breakthrough on long-standing negotiation topics, such as the finance goal, will be helpful. While we know that the USD 100 billion goal is unlikely to have been met so far, COP26 will be an opportunity to restore confidence of emerging and developing markets by setting out a clear plan for its achievement, and discussing what will come next.

In addition, the collective ambition of the NDCs will be a notable aspect on which the conference will be judged as this is the first milestone for countries to submit their updates under the Paris Agreement. Unfortunately, so far, they are not collectively aligning with a 1.5°C world, but hopefully we will see some stepping up on ambition from laggards such as Australia, as discussions progress.

The role of investors

Investors will play a crucial role, both in the run up to and during COP26, particularly in the context of finance being one of the priority negotiation topics. Attention will be on global governments and how they will be addressing the climate crisis through appropriate policy action, and so there is a tangible opportunity to secure the policies needed to channel trillions of dollars into building a sustainable future.

Many nations are already improving their climate policies ahead of COP26, with positive developments including significantly higher emissions reduction targets recently announced by the US, EU, UK and Germany. However, significant gaps remain in many countries, highlighting the need for further ambition. The UK is currently the only G20 country whose 2030 target is considered 1.5°C compatible, however its policies and international support are not yet aligned to this target.

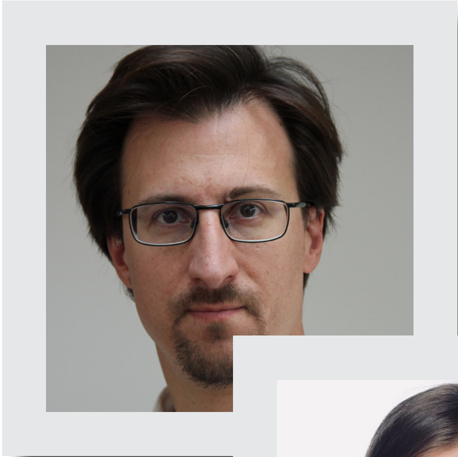
This is why IIGCC has collaborated with six other networks as part of the Investor Agenda to develop the 2021 Global Investor Statement to Governments on the Climate Crisis, which has now been signed by nearly 600 investors with over USD 46 trillion in assets under management. The statement calls upon all governments to:

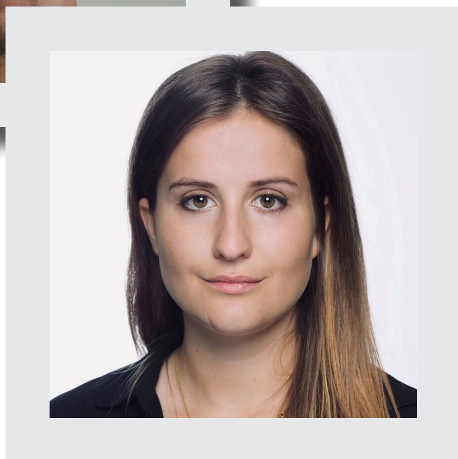
- Strengthen their NDCs to align with limiting warming to 1.5°C.
- Commit to a domestic mid-century net zero emissions target, including clear decarbonisation roadmaps for each carbon intensive sector.
- Implement domestic policies to deliver on that targets.
- Ensure Covid-19 recovery plans that support the transition.
- Commit to implementing mandatory climate risk disclosure requirements.

It represents the strongest ever global unified call from investors to governments to raise their climate ambition and implement meaningful policies, or risk missing out on the enormous investment opportunities in tackling the climate crisis, representing the extent to which policy change and action is urgently needed and this is a real priority for the investor community.

> COP26 is expected to be one of the most significant since the Paris Agreement came into place, with stakes and expectations higher than in any year since 2015.

WHAT A STRANGE MARKET WHEN BANKS CALL FOR MORE REGULATION!





Laurent Adoult, *Managing Director, Head of Sustainable Banking, FI & SSA Europe, Crédit Agricole CIB*
Marine Tabary, *Sustainable Banking Analyst, Crédit Agricole CIB*

To ensure the credibility of the fast growing sustainable finance market, it has become essential that regulators step in to define what is green as well as the prerequisite for green instruments.

Hence it is an interesting development to see that over the past year, we have witnessed the progressive strengthening of regulation in the sustainable finance industry, mostly driven by the EU.

Indeed, until recently, the market grew in a bottom-up fashion with very limited structure and incentives from the regulator. This is progressively changing as we see a global trend towards transparency and standardization adopting a different pace according to the country considered.

> This regulatory wave should yield positive consequences as the increased level of transparency benefits the whole chain of actors. The quality of ESG instruments will be a necessary condition to drive volumes and scale up the market.

With this aim, the EU is providing a complete ecosystem for sustainable finance: The Green Bond Standard (to be adopted in 2022) provides an overarching structure for Green Bonds, the Taxonomy[1] defines which activities can be considered green while the SFDR[2] and CSRD (expected adoption in 2022) set mandatory ESG disclosure for asset managers and companies.

In China, an updated version of the Green Bond Catalogue defining eligible projects has been issued in 2021, more ambitious than the previous one. The US, which is lagging behind in terms of sustainable finance regulation, has announced greater ESG disclosure requirements. In addition, several other countries are in the process of adopting Taxonomies to define green activities (e.g., Russia, UK) or transitional ones (e.g., Canada, Japan).

In the wake of COP 26, investors are also putting mounting pressure on governments. In July, nearly 600 investment firms, totaling one third of global invested assets, have issued a statement which urges governments to step up their action against climate change through five priority actions, one of which is mandatory climate risk disclosure requirements.

In this context of increasing standardization, regulators are embarked on a race to set the global market standards. If the taxonomies under construction pretend to be solely science-based, they are always politically tainted to some extent and serve the transition agenda of their country or region.

1 *Regulation (EU) 2020/852 (Taxonomy) on the establishment of a framework to facilitate sustainable investment*
2 *Regulation (EU) 2019/2088 on sustainability‐related disclosures in the financial services sector*

This can be illustrated by the controversies surrounding nuclear and gas energy in the EU taxonomy driven by conflicting national strategies. Likewise, Japan and Canada have been developing their transition taxonomies because of their significant exposure to carbon-intensive industries. These national interests lead to divergences between classification schemes used in different countries which could lead to additional confusion rather than to the clarity they are supposed to provide in the market. However, we can assume that these discrepancies will tend to decrease with time, and that taxonomies will progressively converge as investors will be interested in instruments structured according to ambitious overarching frameworks.

> We can assume that ... taxonomies will progressively converge as investors will be interested in instruments structured according to ambitious overarching frameworks

This should even out national specificities and lead to taxonomies that are genuinely based on science and solely serving environmental interests. This happened with the inclusion of "Clean Coal" in the first Chinese Green Bond Catalogue before being removed in the 2021 update after facing several controversies.

The pending question is whether these taxonomies will converge fast enough to meet the global environmental agenda. A practical consequence to these regulatory evolutions is the shift in the definition of green assets: from something relative as it was defined by best-market-practice, it is now something that is based on technical considerations. This leads to a shift in the level of expertise required and will reshape the daily job of green bankers.

On the investor side, a similar trend towards greater disclosure is underway.

Asset managers now have to disclose under the EU's SFDR regulation the level of sustainability integration of each fund. With the progressive increase of assets managed according to ESG criteria, we can assume that in the near future, being labelled article 8 will become the norm alongside an increasing share of article 9 funds.

In the US, the recent controversy on ESG funds is encouraging the SEC to consider more stringent disclosure requirements for funds marketing themselves as ESG. The outcome of this event might be for asset managers to delegate the assessment of the "greenness" of an instrument to the legislator limiting human bias to avoid controversies.

In a similar fashion as for sustainable bankers, it's likely that these new regulations will profoundly reshape the role of ESG analysts as the job would become driven by compliance considerations rather than by one's vision on sustainability.

> It's likely that these new regulations will profoundly reshape the role of ESG analysts as the job would become driven by compliance considerations rather than by one's vision on sustainability.

In Europe, this trend could also apply to equity investors shortly since their ESG screening could rely heavily on the percentage of alignment to the taxonomy of investees.

It is also important to note that even outside the sustainable finance market, there is an increasing trend towards ESG integration in the risk analysis of rating agencies, banks, and insurances, which further requires extra-financial disclosure.

This year, the Bank of England and the European Central Bank will run climate stress tests for the first time to assess the potential impact of climate change on banks and companies. China's central bank is pretty advanced on this matter and will soon release its results for 2021. In the US, the Fed has published a few days ago a model for potential future climate stress tests, although it has no immediate policy implications.

In this increasingly regulated context, banks play a double role. First, they can contribute to shaping the regulation on environmental and social stakes. This was the case with the green bond market, which first emerged as a private sector initiative with the regulator now setting a regulatory framework. This could have broader implications as taxonomies could be a basis for public policy. The second role of banks is a role of enabler, because they create pathway dependency effects through investment in environmentally viable technologies.

> Crédit Agricole has been an early player in the market and an active advocate for sectorial regulation initiatives.

Crédit Agricole has been an early player in the market and an active advocate for sectorial regulation initiatives: for instance, it was one of the founding members of the Equators' Principles in 2003 and the ICMA's Green Bond Principles in 2014. In 2019, it was also the first major financial institution to commit to a coal phase-out. It also pleaded for a common definition of green activities established by the regulator and took part in the TEG of the Taxonomy as we believe that more regulation favors the growth and credibility of the market.
If this trend towards regulation is clear and consistent, there remains some untapped areas for which the regulatory process has not, or barely, started.

This is the case for Sustainability-Linked financing, which accompanies actors in their sustainability transition, making it mandatory to be able to assess which is the correct transition pace and which performance targets are ambitious.

Like for green instruments, the regulator might need to intervene and provide a common assessment framework for transition trajectories. Having clear sectorial transition pathways will make it possible to meet environmental constraints while avoiding the sudden collapse of entire industries, which would result in a tremendous social cost.

This fair transition will also require establishing a standard definition of social activities. The EU will attempt to do so in its upcoming social taxonomy.

Once there will be a shared definition of sustainable activities, the end state for a fair transition might be to restrict the investment scope to assets that are both green and social rather than just financing green or social.

COUNTRY REPORTS

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THE GREAT WHITE NORTH GOES GREEN

Canada may be a carbon-heavy economy, but it's developing a comprehensive gameplan for greening finance, explains Gina Gambetta

Gina Gambetta, *Biodiversity & Human Rights Reporter, Responsible Investor*

Canada may be one of the world's highest per-capita carbon emitters, but that hasn't stopped it from making a play to become a leader in green finance.

According to the Global Sustainable Investment Alliance, the country has seen the biggest increase in sustainably-managed assets internationally over the past two years - a trend driven partly by the federal government's recent efforts to promote ESG. In 2018, it appointed a small but mighty 'Expert Panel on Sustainable Finance', comprising Tiff Macklem (now Governor of the Bank of Canada), Barbara Zvan (now CEO of Canada's University Pension Plan), Kim Thomassin (Executive Vice-President of Caisse de Dépôt et Placement du Québec), and Andy Chisholm (Corporate Director at Royal Banking of Canada). The quartet was tasked with advising the government on how it could foster sustainable finance and safeguard the economy against climate risk.

Its recommendations were presented a year later, and many are being taken up either by policymakers or by market participants.

A Canadian taxonomy, for example, is slated for release by the end of 2021. The framework, inspired by similar efforts in Europe, will provide principles for entities seeking to transition to a lower-carbon economy, and a list of activities they should finance to get them there.

Notably, the taxonomy will identify 'transition' activities - not those aligned with Net Zero – and is being developed by market participants instead of policymakers, so its uptake will be completely voluntary.

Many expect the new taxonomy to enable the issuance of 'transition bonds', to help satisfy Canadian investors hungry for greener lending opportunities, and in turn provide companies with a potentially lower cost of capital. But it could also serve another purpose: in its 2019 report, the Expert Panel suggested that Canadian investors establish a national version of the global shareholder engagement initiative Climate Action 100+, which has coordinated hundreds of institutional investors in a bid to pressure the world's biggest polluters into making climate commitments.

In October, Climate Engagement Canada was formed, with 27 founding members including big names like RBC Global Asset Management, Alberta Investment Management Corporation and Manulife Investment Management. The group will soon unveil its list of target companies – expected to be the most carbon-intensive listed firms in Canada – and the national taxonomy will be one of the tools it can use to help steer the conversations with corporates and provide clear definitions of what a climate transition looks like in the Canadian context.

> Canada may be one of the world's highest per-capita carbon emitters, but that hasn't stopped it from making a play to become a leader in green finance.

While both the taxonomy and Climate Engagement Canada are market-led initiatives, the government has been making moves of its own. In May, it set up the Sustainable Finance Action Council to replace the Expert Panel on a permanent basis, helping policymakers drive forward the ESG agenda over the years ahead. A mix of public- and private-sector players, the Council will advise the government on everything from green investment standards to climate data and disclosure.

On the latter, Canada is already pushing hard: this summer it submitted a formal offer to host the new International Sustainability Standards Board (ISSB), which will develop global ESG disclosure standards, and a decision is due any day now.

The Sustainable Finance Action Council will work with the Net-Zero Advisory Body, another new group created in February as a hub for the Canadian government's climate efforts across finance, industry and public policy. That body will oversee the creation of decarbonisation strategies for key Canadian industries – another of the Expert Panel's recommendations – which will feed into future iterations of the taxonomy and the efforts of Climate Engagement Canada.

Elsewhere, the Office of the Superintendent of Financial Institutions, which supervises Canada's lenders and insurers, will unveil plans to introduce new climate-related policy in the first part of 2022. It's already working with the central bank on climate-risk scenarios, and has partnered with the Canadian Association of Pension Supervisory Authorities to produce guidance on how to integrate ESG into pension investment decisions. On the retail side, the Investment Industry Regulatory Organization of Canada is under pressure to add sustainability questions into the list of questions that financial advisors must ask before recommending financial products to their clients. It's a move that's already been made in the EU, and is expected to trigger a surge in demand for ESG and impact funds from savers.

So, while Canada's efforts on sustainable finance are relatively recent, they are coordinated and wide-ranging. And if all these new initiatives, bodies and consultations bear fruit, the country will no doubt continue to dominate the league tables for sustainably-managed assets.

“This summer Canada submitted a formal offer to host the new International Sustainability Standards Board (ISSB), which will develop global ESG disclosure standards, and a decision is due any day now.

CLIMATE FINANCE IN CHINA: PROGRESS AND NEXT STEPS

***Guo Peiyuan,** Chairman of SynTao Green Finance*

China Enhances Climate Commitment

For the last decade, China has proactively participated in global efforts to tackle climate change issues. The most important milestone was the 2060 carbon neutrality target raised by President Xi Jinping in his address to the general debate of the 75th session of the United Nations General Assembly last year. According to this commitment, China will reach carbon emission peak by 2030 and carbon neutrality by 2060.

After this, this commitment has been further enhanced twice, once in December 2020, where the NDC was updated, the goals of carbon intensity reduction further reduced, increasing the non-fossil share. The second was in September 2021, when China promised not to build new coal-fired power plants abroad.

Evidently, climate issues enjoy a high position on China's political and economic agenda. Mr.Xie Zhenhua, China's climate change special envoy, states that the country will develop a "1+N" policy system to support the carbon-neutral transition. "1" stands for an overall guiding policy. "N" entails action plans of some focused areas and sectors, including (1) energy restructure; (2) industrial emission cut; (3) green buildings; (4) low carbon transportation; (5) circular economy; (6) low carbon technologies; (7) green finance; (8) legislation and reform; (9) carbon trading market and (10) nature-based solutions.

Financial Regulators Push Hard

Though green finance is just one of ten measures mentioned above, it attracts the most attention. Several pieces of research indicated that investments of around 140 trillion RMB in total are needed in the following decades to realize the carbon neutrality target. This April, Mr. Yi Gang, Governor of the People's Bank of China (PBoC), mentioned in a joint seminar by PBoC and IMF that central banks could contribute to the net-zero goal in many ways, such as developing a solid policy system, a diversified market system, and enhancing international coordination.

In the past few months, the PBoC has progressed in some fields: firstly, in collaboration with the capital market regulator (China Securities Regulatory Commission, CSRC), a new green bond standard has been developed that removed coal. This new standard has become effective since July 1st, 2021. In the meantime, the PBoC also encourages commercial banks to invest in green bond assets by including these assets in quarterly evaluations for green banking. Secondly, PBoC plans to strengthen climate and environmental disclosure among financial institutions. The Guideline of Environmental Disclosure for Financial Institutions was published in August, setting a voluntary standard for financial institutions, especially banks, to measure and disclose environmental information, including climate risks. Banks in green finance pilot zones will probably be the first to be mandated for its implementation. Thirdly, the climate factor is introduced to policy frameworks such as financial stability administrative policy, foreign reserve investment policy. It is reported that PBoC has carried out climate stress testing among pilot banks.

Other financial regulators also contribute to the carbon neutrality target. China Banking and Insurance Regulatory Commission (CBIRC) called up banks and insurance companies to support carbon neutrality. The CSRC encouraged listed companies to disclose carbon reduction measures and data in annual reports. After National Carbon Trading Market was launched, CSRC stated its newly established Guangzhou Futures Exchange will explore carbon futures products connected to the national carbon market.

Financial Markets Respond Proactively

Signals from regulators are clear enough; therefore, the whole financial markets respond very proactively. Several large financial institutions develop climate finance strategies. For example, in late September, the Bank of China created a carbon neutrality action plan. According to this plan, the Bank of China will provide 1 trillion RMB supports on climate financing by 2025, and 10% of its loan will be green by that time. In addition to that, the Bank of China will not finance new coal-fired power plants overseas starting from Q4 this year.

There is no doubt that green debt will increase significantly in the next few years in China. Lending from commercial banks (i.e., green loans) will be the most significant part of this market. According to PBoC, by late June this year, there was 13.92 trillion RMB green loan, representing 7.5% of China's total loan market. Among these green loans, 67.3% have a direct or indirect contribution to carbon emission cuts.

The green bond is the second most significant part of the climate finance instrument following the green loan. Earlier this year, two new product innovations related to carbon neutrality were released: the carbon neutrality bond, a sub-category of green bond with a unique purse for carbon reduction, with more than 100 carbon neutrality bonds being issued this year; And the Sustainability-Linked Bond (SLB), a debt instrument that creates a link between financial conditions and the issuers' sustainability performance targets (SPTs). These innovations will drive the future growth of transition finance.

As for the equity market, carbon neutrality has become a trendy concept in China. In the public (secondary) market, there are 15 equity mutual funds categorized as carbon neutrality funds. SynTao Green Finance collaborated with Orient Securities and published a Carbon Neutral Index. In the private equity (PE) market, several large PE investors, such as Sequoia Capital and Hillhouse Group, form new investment funds with 10 billion RMB or above, targeting carbon-related sectors.

Guo Peiyuan, Chairman of SynTao Green Finance and China Advisor to UNEP FI

Dr. Guo Peiyuan, who holds a Ph.D. in Management from Tsinghua University, is Chairman of China SIF and SynTao Green Finance. Dr.Guo also serves as committee member of China Green Finance Committee, China Green Securities Committee, and advises UNEP FI's work in China. Dr. Guo founded China SIF in 2012 that aims to promote ESG development in China and facilitate international exchange. China SIF organizes summer summit and annual conference every year.

National Carbon Trading Market was formally launched on July 16th, 2021. Its market size and liquidity are still quite challenging. By mid-October, the accumulated trading amount was around 800 million RMB, much smaller than that of the green debt. Therefore, it needs more time to observe the actual influence of the National Carbon Trading Market in China.

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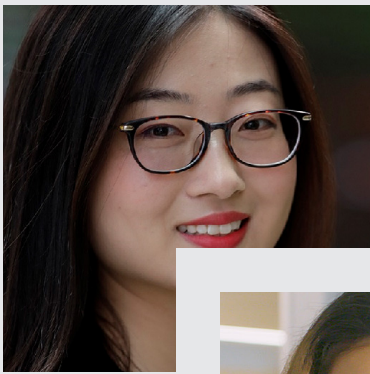
SFDR: LAYING THE FOUNDATIONS OF A STRONGER SUSTAINABLE INVESTMENT MARKET

***Min Qi**, Product Manager, Sustainable Investment, FTSE Russell,*
*and **Elena Philipova**, Director, Sustainable Finance, Refinitiv*

Min Qi



Elena Philipova

The end of June 2021 marked the latest deadline in the introduction of the EU Sustainable Finance Disclosure Regulation (SFDR). From that date, larger financial firms will have to begin disclosing the "Principal Adverse Impacts" their investments have on social and environmental issues. It is the latest step in a process that, over the next two years, aims to transform disclosure of the environmental and social impacts of investment products and how sustainability risks are managed within those products.

The SFDR is a key component of the EU's Sustainable Finance Action Plan, which aims to encourage capital to flow towards companies and activities that support the EU's environmental and social objectives. The regulation is primarily intended to standardize the language and disclosure of sustainable investment (SI) products, promoting transparency and reducing the risk of investors being misled via "greenwashing."

Specifically, it applies to financial advisors and market participants including asset managers, pension fund providers and insurance companies. It imposes obligations at both the entity and individual product level. It applies to all financial products marketed in the EU, including by entities based outside the bloc.

Under SFDR, financial market participants are required to disclose how they take sustainability risks into account, or otherwise explain why they do not. Those who market SI products face additional product-level disclosures, governed by Article 8 of the regulation for those with "ESG characteristics" and Article 9 for those with "sustainable investment as their objective."

It can be challenging for providers to understand whether sustainable investment products should fall under Article 8 or 9, as some of the wording in the regulation is imprecise. For example, it does not clearly define "good governance"— a key concept in applying disclosures required by the two articles. FTSE Russell has taken the view that applying ESG data or controversy screening criteria would demonstrate good governance at the index level at least for level 1 legislation, but further clarification is likely to be forthcoming when the level 2 legislation is finalized.

Fundamental to the SFDR is the concept of "Principal Adverse Impact" statements mentioned above. These detail the potential material impacts on sustainability factors relating to environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters.

These are captured by more than 60 indicators that regulated entities are expected to monitor, manage and report on. The difficulty here is that these combine environmental and social metrics with fundamental corporate and economic data; it's essential that providers can effectively assimilate macroeconomic data, company fundamentals, and ESG data across asset classes.

Certainly, complying with the requirements of the SFDR will be a significant undertaking for most firms. It will require the careful interpretation of the regulations in the context of evolving practice and continuing guidance from the European Commission and the European supervisory authorities. Also, it will necessitate new data aggregation and reporting processes. We are seeing considerable demand not only for advice around the regulation, but also for the outsourcing of these new data aggregation and management processes.

Where the EU leads, other jurisdictions are likely to follow. The SFDR applies to all products sold into EU markets, so financial firms headquartered outside the bloc will already need to meet the regulation's requirements for part of their product range; some may decide to extend the exercise to most or all of their products. In addition, and as we have seen for other elements of the EU's sustainable finance agenda (e.g. the EU Taxonomy), policy makers elsewhere may decide to mirror some or all of the SFDR's requirements.

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This is particularly the case given the intent of the EU in introducing the regulation. As with any new regulatory requirement, it will impose near-term costs as novel processes are put in place. However, it is worth remembering the intent of the SFDR and the opportunities it is likely to unlock.

First, by helping the industry reach common definitions around sustainable finance, the regulation should, over the long run, decrease costs and friction between corporate issuers, data providers, financial institutions and end-investors. Second, the new sustainable finance strategy provides for minimum standards for Article 8 funds, which should help to clarify what is (and isn't) an "SI product"—reducing confusion among investors and helping to mitigate the risk of greenwashing. In doing so, it will help build confidence in part of the market that not only offers a crucial source of growth to the financial services industry but will also be an essential engine in the shift to "net-zero" carbon emissions within the global economy.

ITALY: A NEW DAWN OF SUSTAINABLE INVESTING

Marta Pievani, *ESG and Impact Investing Manager, Generali Insurance Asset Management;*
Francesca Albino, *Senior ESG and Climate Investment Analyst, Generali Insurance Asset Management*

Generali Insurance Asset Management is part of the Generali Investments' platform

Marta Pievani

Francesca Albino

Recent EU regulation and the urgency of physical climate risk have awakened Italian investors and sensitized them to sustainability issues, narrowing the ESG integration gap across Europe.

France and Germany have historically been Generali Insurance Asset Management's ("GIAM")'s most advanced client base in terms of ESG portfolio integration but Italy is fast catching up. Since the Corporate Sustainability Reporting Directive (CSRD) on the taxonomy of environmentally sustainable economic activities and sustainability-related disclosures in financial services, we have been struck by the rapid pace at which Italian asset owners have transitioned from using mainly exclusion-based investment approaches to fully integrating increasingly broad sets of ESG considerations into their investment strategies.

For our clients in Italy – pension funds, third-party insurers and Generali Group companies – managing long-term funding risk is their central objective. We have observed that the biggest trends driving ESG integration among Italian pension funds and insurers include managing risks arising from the transition to a decarbonised economy and mitigating the level of physical climate risk in their portfolios. At GIAM, we help clients navigate these risks with Liability Driven Investment (LDI) solutions, systematic strategies and bond-focused approaches, as well as other challenges related to the social and governance aspects of ESG.

In our view, the efficacy of European transparency regulations goes hand in hand with addressing one of the most important limitations of ESG analysis: the lack of accessible and reliable data on the market. We are firm believers that what gets measured, gets managed. The practical implications of the CRSD regulation are vital to increasing the quality and quantity of ESG data available to investors like us, who believe in the value of fully integrating ESG into investment processes.

One current challenge is that non-EU businesses are not subject to CSRD. Global investments simply do not have the same level of data available as those from EU-listed companies. Another challenge is that, in a low yield world, real assets and private markets continue to be in strong demand in Italy. But the fact that micro-enterprises are not subject to ESG disclosure requirements and that small-cap reporting will not be available until 2026 is causing uncertainty for private equity impact funds.

Small and medium-sized enterprises dominate the business landscape in Italy, accounting for nearly 80% of the industrial

> We have been struck by the rapid pace at which Italian asset owners have transitioned from exclusion-based investment approaches to fully integrating increasingly broad sets of ESG considerations.

and service labour force, and generating about two-thirds of turnover and value added.[1] This matters because SFDR regulations require all funds, including private equity funds, to disclose and distinguish between products that promote environmental or social characteristics (Article 8 under SFDR) and products whose objective is sustainable investment (Article 9 under SFDR).

This regulatory mismatch means it may be harder to classify some Italians SMEs and therefore accurately label Article 9 funds; we see a great need to better align small companies with ESG disclosure standards. However, as active investors who are committed to supporting and impacting the real economy and sustainability, we have for some placed the highest importance on engaging with investee companies in anticipation of new regulation in order to sensitize them to ESG disclosure requirements and best-practice reporting, as well to discover investment opportunities.

Shift to renewables

The ongoing gas supply shortage across Europe, well as the supply chain fragilities that were exposed during the height of the pandemic, has highlighted the urgency for Italy to decarbonise and shift to renewable energy, to support a Just Transition, and to relieve the country's heavy reliance on energy imports.

Italy's per capita energy consumption is nearly 20% lower than the EU average (2.3 toe in 2020) yet energy prices are among the highest in Europe. The country imports around 82% of its energy, compared to the European average of 55%. On the positive front, Italy has one of the countries with the lowest levels of energy intensity and this has been steadily declining due to technological improvements in smart metering and electric generation, for example, and numerous energy efficiency measures, such as the White Certificates Scheme where tradable certificates are generated from energy-saving measures.

This backdrop means there is strong momentum within Italy for a greater shift to renewables. The national energy and climate plan has set very ambitious targets for renewables by 2030, aiming to reach 30% in total energy consumption and 55%[2] in electricity generation.

Decarbonisation

At a Group level, Generali is a member and supporter of the Net Zero Asset Owner Alliance. At GIAM, we collaborate with investee companies to help them set challenging targets and methodologies to help them to decarbonise. We firmly believe in supporting 'brown' companies to become green, and not simply investing in green companies.
We view energy transition risk and physical climate risk as the two of the most important climate-related challenges that we help our clients and investee companies navigate. Both are correlated to each other, and both pose significant financial risk to investors, particularly asset owners and liability-driven investors with long-term investment horizons. In terms of helping clients to decarbonise their portfolios, there is no one-size-fits-all approach, so this can include feasible target-setting, modelling, creating bespoke investment frameworks and portfolio optimisation methodologies. The future is racing towards automation, which creates portfolios that can automatically adjust to achieve a certain climate goal, for example.

In our investment process, we acquire physical climate risk data, which includes information on where a company's core operations are, if and how the company is prepared for climate-related disasters and events, and their supply chain vulnerability. With such uniform, reliable and comparable datasets, we are able to develop processes and methodologies to include scenario analysis, building reliable estimates and metrics to synthetize and quantify the impact of physical climate risks for decision-making. By assessing and then managing physical climate risk exposures, we aim to develop strategies that adapt and build the resilience of our investments.

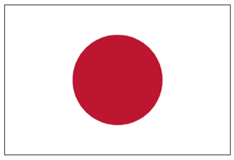
A blossoming green bond market

Despite the low yielding environment, fixed income remains immensely important for pension funds and insurers in Italy. Fortunately, green and social bond issuers are flourishing in Italy. The growth of private sector green bond issuance means that they are rapidly becoming an important segment of the Italian corporate bond market. In a key milestone, Italy issued the world's largest sovereign green bond in March 2021, becoming the tenth European government to issue a green bond after last year's boom in Europe. The funds can be deployed in sectors including renewable electricity and heat, energy efficiency, transport, pollution prevention and control, the circular economy, environmental protection and biodiversity, and research. At a Group level, Generali became the first issuer in the European insurance sector having issued two green bonds in 2019 and 2020.

1 *Source:* https://www.oecd-ilibrary.org/sites/f1890aaa-en/index.html?itemId=/content/component/f1890aaa-en
2 *Source:* https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/gx-er-market-reform-italy.pdf

At GIAM, we strongly believe in the role of sustainable finance in supporting the transition to a more sustainable economy and we are optimistic about the future of sustainable investing in Italy. Leveraging our 35-person strong in-house research and 14-strong investment stewardship team who manage ESG analysis, we help clients understand rapidly changing sustainability regulations and the practical implications of 'greening' their portfolios by promoting or integrating sustainable objectives. GIAM has supported Generali Group and its third-party clients in the implementation of the Group Ethical Filter and customized negative-screening policies since 2006 and is now supporting the Group to meet its decarbonisation targets and apply ESG specific filters to increase the environmental and social quality of their portfolios.

> "We view energy transition risk and physical climate risk as the two of the most important climate-related challenges that we help our clients and investee companies navigate. Both are correlated to each other, and both pose significant financial risk to investors, particularly asset owners and liability-driven investors with long-term investment horizons.



URGENT, COMPLEX, INTERCONNECTED CHALLENGE: JAPAN'S RESPONSE TO NET ZERO

***Takeo Omori**, CFA, ESG Analyst, Responsible Investment Group*
Asset Management One Co., Ltd.

Asset Management One Co., Ltd (AMO) is one of the founding signatories of the "New Zero Asset Managers" (NZAM) initiative. Established in December 2020 the initiative is composed of leading, global asset management companies aiming to achieve net zero greenhouse gas ('GHG') emissions. AMO is one of six asset managers, and the only signatory from Asia to be a member of the "Advisory" Group" which play a consultative role to the Steering Committee in support of the management of NZAM.

Since its founding with 30 signatories and after a mere seven months, the number of asset managers has dramatically increased to 128 at the end of July 2021 representing approximately US$43 trillion in assets under management.

Signatories to the NZAM have committed to supporting the goal of net zero GHG emissions by 2050, which aligns with global efforts to limit warming to 1.5C. These global asset managers also have committed to setting an interim target for the proportion of their assets to be managed in line with the attainment of net zero emissions by 2050 or sooner, by working with asset owners and clients on decarbonization goals. AMO has stated an interim target for 2030; aiming to commit 30 trillion yen ($274 billion) worth of investment assets out of our total AUM (57 trillion yen as of the end of March 2021) to align with the net zero scenario.

Climate change is an urgent global issue and a complex challenge interconnecting multiple issues across a spectrum of disciplines. It is essential for all stakeholders, including governments, companies and consumers, to work in cooperation towards resolving this ever-changing issue.

As an asset management company, AMO is committed to collaborating with all constituents in the investment chain to accelerate the transition of society towards net zero, in particular in the following three areas.

1. We will strive to increase the amount of assets managed that align with the net zero initiative. This includes offering active strategies which invest in companies possessing the ability to increase their enterprise value whilst working toward the aim of net zero goals. From the quantitative and qualitative perspectives, we will assess investee companies and direct capital to support those companies that demonstrate an active commitment and make solid progress in achieving net zero. For passive strategies, in addition to index tracking funds, we are planning to launch passive products with a focus on engagement to encourage a wider range of companies to act and make the transition towards net zero. This approach will enable AMO to raise awareness and drive action across the entire market, including companies that have not yet taken the necessary steps, as well as those companies that are already working towards net zero goals.

2. Through engagement with investee companies, the firm is a proactive proponent of encouraging companies to transform their business models towards increased sustainability and decarbonization. Rather than simply divesting from the companies that are not yet fully aligned with the net zero scenario, our priority is to actively engage with these companies. Our goal is to gain a holistic understanding of the company which allows us to have a constructive dialogue that will bring about improvement

Takeo Omori, Asset Management One

Mr. Omori is an ESG analyst of Responsible Investment Group at Asset Management One Co., Ltd. which was created on October 1, 2016 through the integration of DIAM Co., Ltd., the asset management function of Mizuho Trust & Banking Co., Ltd., Mizuho Asset Management Co., Ltd. and Shinko Asset Management Co., Ltd.
Mr. Omori joined Responsible Investment Group as ESG analyst in April 2017 and is in charge of ESG engagement for foreign equities and Climate Action 100+.

Prior to joining Responsible Investment Group, Mr. Omori was Chief Analyst of Asian Equity at Asset Management One and Mizuho Trust & Banking.

Prior to covering Asian Equity, Mr. Omori was in charge of US equity in New York at Mizuho Trust & Banking.

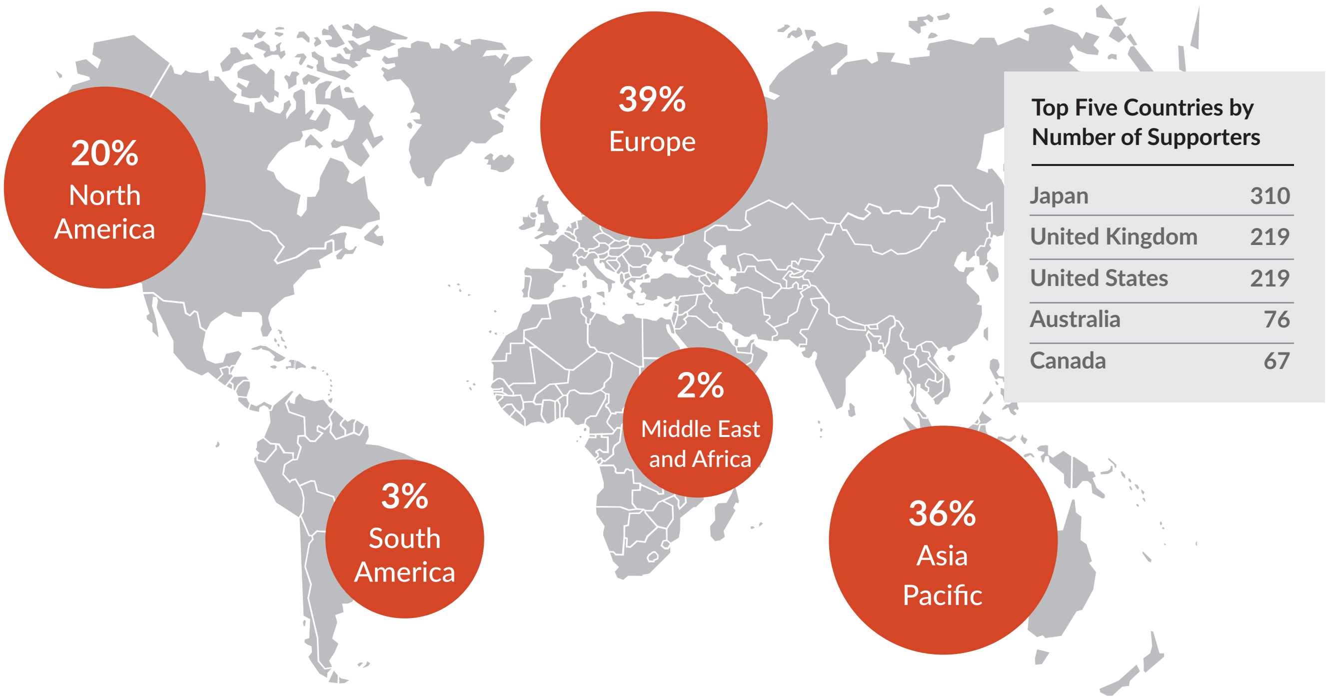
Mr. Omori graduated from The University of Tokyo with BA in Economics and earned an MBA from The Carlson School of Management at University of Minnesota. He is a CFA charterholder and a chartered member of the Security Analysts Association of Japan (CMA).

and positive changes. Where there is no evident progress despite this engagement, we will consider opposing the proposed election of board directors at the respective companies when exercising our voting rights.

3. We will continue working with policy makers and other related organizations to strengthen ongoing efforts towards achieving net zero goals by 2050. This is exemplified by AMO's participation in climate change and environment-related study groups and initiatives established by the Ministry of Economy, Trade and Industry and the Ministry of the Environment.

Another climate change initiative having an impact on the marketplace is the Task Force on Climate Related Financial Disclosures (TCFD). Created in 2015 by the Financial Stability Board (FSB) the Task Force states its remit is "to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit, and insurance underwriting decisions and, in turn, enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks."
Source: TCFD https://www.fsb-tcfd.org/about/#our-goal

Figure 1 - Geographic distribution of TCFD supporters



Top Five Countries by Number of Supporters

Japan	310
United Kingdom	219
United States	219
Australia	76
Canada	67

Source: https://www.fsb-tcfd.org/about/#our-goal

Japan has the largest number of TCFD supporters in the world. According to last year's task force Status Report, the number of supporting companies and organizations is 310 in Japan, compared to 219 in the UK and the US respectively. One of the reasons for this, we believe, is engagement by asset managers like us. When we seek investee companies to take action on climate change, we encourage them to consider TCFD as a starting point.

AMO is not only an advocate for firms to support TCFD but we are making an active contribution to the TCFD Consortium in Japan as a member of the steering committee. The TCFD Consortium in Japan is a unique initiative that brings together various companies from across industries e.g., financial institutions, banks, academics and government agencies

The TCFD is an important reporting framework, although there are some challenges in implementation. And the TCFD Consortium is a forum established for companies and investors to work together and share their views. Because some companies may find climate change reporting daunting, the Consortium has published guidance for investee companies in some industries and investors.

Japan's Corporate Governance Code was revised in June of this year. It states that companies should disclose climate-related information based on TCFD recommendations, although not for all listed companies but for companies listed on the Prime market.

As the Tokyo Stock Exchange will restructure its market into three new markets in April next year, companies should comply with the new Corporate Governance Code in order to stay within the top tier of the market. It is a case for a company to either disclose climate related information based on TCFD or explain to the regulators. This new Code is expected to have a significant impact on the Japanese market as most companies will follow the disclosure recommendations.

These are dynamic climate change initiatives with lasting impact, and there is no room for ambiguity or inaction. AMO will continue to engage, advocate and challenge in collaboration with our clients, investee companies, policy makers and global organizations as we strive to be an asset management company that contributes to creating a sustainable future.

THE UK'S NEW GREEN FINANCE ROADMAP PUTS IT ON THE ROAD TO CLIMATE LEADERSHIP

James Alexander, *Chief Executive of UKSIF, the UK's Sustainable Investment Forum;*
Oscar Warwick Thompson, *Senior Policy and Communications Manager, UKSIF*

In October 2021, in the run-up to hosting the COP26 climate negotiations, the UK Government released 'Greening Finance: A Roadmap to Sustainable Investing'. This roadmap is perhaps one of the most significant policy documents for the sustainable finance sector since the UK's departure from the EU. Following many months of uncertainty in the sector over the government's approach, it provides significant clarity on a number of areas central to the continued growth of sustainability in the UK.

Building on the national Green Finance Strategy from 2019, the roadmap outlines the government's intention to raise the UK's ambitions in 'greening' the financial system - one of the Strategy's original aims - as it seeks to achieve Net Zero by 2050 at the latest.

Its overarching objective centres around disclosures, promoting the flow of sustainability information across the whole economy, from companies to financial services, to influence financial decision-making.

The roadmap seeks to achieve this through a new Sustainability Disclosure Requirements (SDR) regime, first trailed in the Chancellor's Mansion House Speech in July. It provides the greatest sense yet of the UK's direction of travel.

The SDR will encompass all sustainability disclosure requirements in a single, integrated framework. This is clearly a huge undertaking: it will cover financial services and corporate disclosures using both the UK's upcoming 'green taxonomy', and the more established recommendations of the Taskforce on Climate-Related Financial Disclosures. On the latter, UK financial regulators have already begun introducing TCFD-based reporting rules for pension funds, asset managers and companies.

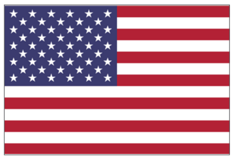
The SDR will also ask some companies to disclose how their climate transition plans align with the government's Net Zero commitment - initially on a 'comply or explain' basis.

The global focus is evident in the UK's SDR regime. Over time (and subject to consultation), it will also include reporting requirements based on standards currently being developed by the International Financial Reporting Standards Foundation, through its new International Sustainability Standards Board.

However, more clarity is still needed on how the plans will fit with the various EU sustainable finance and disclosure rules that are also under development. The roadmap does seem to commit the UK to aligning with Europe on its green taxonomy, at least. There is helpful confirmation that the definitions for business activities that support climate change mitigation and adaptation objectives will be based on those of the EU taxonomy, while more generally the EU taxonomy's structure will be adopted by the UK.

The third main area highlighted in the roadmap - although perhaps overshadowed by the focus on disclosure - is investor stewardship, which the document recognises as crucial to the climate transition. In a list of stewardship-related expectations on the pensions and investment sector, the Government says investors should "actively monitor, encourage, and challenge companies by using their rights and direct/indirect influence to promote long-term, sustainable value generation" and consider withholding capital if firms are not seen to be taking adequate action to support the transition to Net Zero.

Overall, the roadmap signals to the financial sector that the government intends for the UK to play a far more prominent role in the years ahead in addressing climate-related risks, disclosing sustainability information in far greater detail, and moving much faster towards a net-zero future, all of which the sustainable finance sector can warmly welcome.



THE STATE-OF-PLAY FOR SUSTAINABLE FINANCE REGULATION IN THE US

As registration opens for RI USA 2021, Paul Verney takes a look at how regulatory developments are changing the country's sustainable finance landscape

Paul Verney, *Senior Reporter, Responsible Investor*

It's fair to say that the US has been well behind many rulemakers in Europe and Asia when it comes to climate risk (perhaps not surprising, given the political landscape they have been operating under for the last four years). But that landscape has shifted dramatically in 2021, and the US is fighting hard to get back in the race, with big implications for companies and investors.

On Joe Biden's first day as US President, he rejoined the Paris Accord. Within the first six months of holding office, we have already seen him move to rescind controversial Trump-era rules requiring workplace pension schemes to stick solely to financial factors when selecting investments or casting votes at AGMs. Then, in May, he put out an Executive Order on Climate-Related Financial Risk designed to mobilise rulemakers to accelerate their efforts to manage climate risk. Below, I've laid out some of those rulemakers - the agencies that will be key to the success or failure of this turbocharged sustainability push - and how they've responded to the Executive Order so far.

First, though, it's worth highlighting that, while the federal government is sending clear signals about its plans to push US investors and corporations to decarbonise, at state-level it's a more varied picture - and, in some cases, directly at odds with Biden's plans. Texas, for example, passed a bill in June that prevents state pension plans and investment funds from investing in businesses that cut ties with the oil and gas industry.

Financial Stability Oversight Council (FSOC)

A large body of work within Biden's wide ranging Executive Order falls on the Financial Stability Oversight Council (FSOC), the regulatory supergroup created after the financial crisis to monitor risks to the US financial system.

The FSOC is chaired by US Treasury Secretary Janet Yellen and among its 10 voting members are the heads of the country's most powerful financial regulators, including the Chairs of the Federal Reserve, Jay Powell, and the Securities and Exchange Commission, Gary Gensler.

Biden has asked the FSOC to compile a landmark report on the efforts of its member agencies to integrate climate risk into their policies and programmes. That document should include, the President stipulated, recommendations around what additional disclosure measures should be introduced for companies, banks, investors and other regulated entities to "mitigate climate-related financial risk to the financial system or assets".

FSOC Chair Janet Yellen has until mid-November to complete the report, and it's expected to kick off another wave of developments that will have major implications not just for the US financial system, but for the world.

The Securities and Exchange Commission (SEC)

The SEC is the regulator that's undergone the most visible turnaround on ESG since Biden was elected.

Earlier this year, its Division of Examinations identified tackling greenwashing as one of its priorities for 2021. Shortly afterwards, the regulator created a Climate and ESG Taskforce to address potentially false claims being made by funds and investment advisors in relation to ESG labelled products. Since then, it's issued a risk alert on the issue after uncovering instances of ESG products that were investing and voting in ways that seemed inconsistent with their marketing.

The SEC is also mulling dedicated sustainability-related disclosure requirements for companies, pitting it against the EU, which has spent the past couple of years positioning itself as the de-facto global standard setter for ESG reporting through its new Taxonomy and Sustainable Financial Disclosures Regulation, and an overhaul of its Non-Financial Reporting Directive.

The key battle being fought on ESG disclosures is how 'materiality' should be understood. In Europe, rules are being developed to capture 'double materiality' - how business activities impact the environment and society as well as how corporate bottom lines could be hurt by green and social issues. There is pressure in the US for regulators to take a narrower approach, focusing strictly on immediate financial risk.

And it's stirred up the US market. A consultation launched in March on the topic received 550 unique responses by the time it closed in June.

Those consultation responses also highlighted clashes between big companies and asset managers over what form ESG disclosures should take in the US. Some of the tech giants, for example, argued against the inclusion of ESG disclosures in companies' financial filings, with Alphabet and Microsoft expressing concerns about litigation if information submitted in 10k reports was found to be incorrect. But big investors including Pimco and Invesco insisted that financial filings are exactly where such information should be disclosed, to ensure it's taken seriously.

Within the SEC itself, opinions are also divided: the body's five Commissioners have already made more than 10 speeches between them on ESG disclosure this year, expressing differing positions on what the rules should look like. Their final decision is due in October.

Meanwhile, Commissioner Allison Herren Lee has hinted that the SEC could review the 'no action' process through which companies get the go-ahead from the regulator to omit 'inappropriate' shareholder resolutions from the ballot at annual meetings. During Donald Trump's presidency, firms found a lot of success getting ESG-focused proposals excluded via the 'no action' process; although the SEC has become less amenable to such petitions under Biden, with a number of pioneering proposals on race and climate being upheld by the regulator.

There will be a new stumbling block for some shareholders though: under Trump, rules were developed that will require investors to own a higher amount of company stock before they can file a resolution, and proposals will need to have achieved a certain level of support in order to return to the ballot the following year. Those rules are set to come into effect next proxy season, and critics have argued they will stop multiyear investor campaigns on emerging ESG topics. Climate and lobbying-based proposals, for example, received low support for years before they were normalised enough to bag the majority backing they've been getting in the past 12 months. Others say the rule change will simply root out activists and small campaigners that repeatedly file the same proposal without garnering significant support – dubbed "zombie proposals" by the US Chamber of Commerce in a 2018 position paper.

US Federal Reserve

Until last year, the US Federal Reserve was conspicuously absent from global discussions about sustainability, drawing regular criticism for being the only major central bank not to join the influential Network of Central Banks and Supervisors for Greening the Financial System.

But, just like the SEC, the Fed has changed its tune under the Biden Administration, joining the network just weeks after last year's presidential elections. In March, it launched a Supervision Climate Committee to assess how 'climate ready' banks in the US are, with reports that it's already in discussions with big banks on how their loan books would perform under different climate scenarios.

The Fed has also set up a Financial Stability Climate Committee to assess climate-related risks across the financial system – taking a macroprudential view.

It's still early days, and the US has serious ground to make up, but we're starting to see a top-down, coordinated effort to get the world's biggest financial market to deal with sustainability issues - particularly around climate. We'll be discussing this throughout RI USA in December, so join us to hear more about what it means for investors and companies everywhere. Interesting times ahead!

INVESTMENT REPORTS

Section Contents

AN ACTIVE FUNDAMENTAL INVESTMENT APPROACH TO CLIMATE TRANSITION

Esther M. Baroudy, *CFA, Managing Director, Fundamental Growth & Core Equity – Global, State Street Global Advisors*

A determined effort by both the public and private sectors to bring about a significant reduction in greenhouse gas emissions over the next decade offers the potential for significant capital growth in equities. This era of climate transition, when paired with discerning and forward-looking equity investment, presents opportunities for generating significant alpha.

The global economy is fast transitioning from being dependent on fossil fuels to running on clean energy. Governments and companies are taking concrete steps to avoid the worst climate impacts by achieving net zero emissions[1] by 2050. Approximately 70% of the global economy is now covered by net zero targets.[2]

With the arrival of the 2021 United Nations Climate Change Conference (COP26), a series of regulatory and economic drivers are emerging, which have the potential to dramatically reshape equity investing. The COP26 meeting could be a turning point in global efforts to limit carbon emissions through the use of ambitious climate pledges.

While financial systems mobilise trillions of dollars to build a global zero-emissions economy, vast investment in new technologies and capital equipment will also be required to realise emissions reductions of 50% or more by 2030 and a net zero transition by 2050.

The path to net zero requires credible corporate transition plans for emissions reductions. Ultimately, mandatory disclosure on climate-related factors and hard carbon pricing will lead to greater accuracy in quantifying the true cost of emissions.

In a climate-focused world, companies will be expected to have a credible transition plan for net zero emissions. Companies will be assessed on their future transition plans as well as on their progress with regards to their current carbon footprint, as well as on their regulatory and physical risks (the short- and long-term impacts of climate change).

There is already regulatory pressure to incorporate and disclose environmental, social, and governance (ESG) characteristics. An example is the UK roadmap for mandatory Task Force on Climate-Related Financial Disclosures (TCFD) reporting. COP26 is also expected to result in agreements on mandatory climate-related disclosure for corporates. Carbon pricing may eventually be applied to all emission scopes, including supply chains (Scope 3 greenhouse gas emissions).

Corporate transition plans are therefore expected to come under sharp stock market scrutiny. Companies may find themselves having to make new investments or to undertake restructuring in order to achieve net zero emissions in the allotted timeframe. Certain companies will be advantageously positioned to benefit from efforts to tackle climate change.

The implications for investors are clear:

- Climate transition planning and competency will become key areas of differentiation for companies — and key drivers for the valuation of all equities.
- In this shifting climate landscape there will be re-ratings, valuation dislocations, and corporate winners and losers which create an environment ripe for active stock-picking.

1 *Net zero means that carbon emissions are either eliminated or offset.*
2 *United Nations (2021)*

FGC and Climate Investment

State Street's Fundamental Growth & Core Equity (FGC) team takes an active, forward-looking, high-conviction approach to equity investing. This approach demands a thorough understanding of our portfolio companies through deep due diligence and engagement.

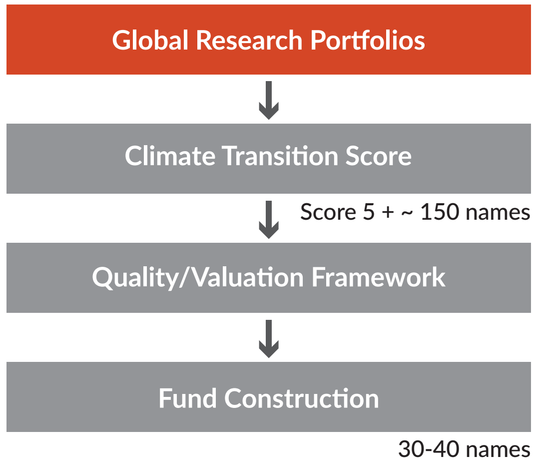
Philosophically, we look for quality, sustainable growth and reasonable valuation. Much of our assessment is qualitative, relying on the judgment of an experienced team, and a culture of collaboration and constructive debate. Relatively few companies meet our strict criteria for investment. For this reason, we seek to concentrate our portfolios in our highest-conviction names.

ESG considerations are integral to the FGC team's alpha thesis and have been fully integrated in the team's investment process since 2002. In recent years, we have continued to evolve our ESG research effort to align with the unfolding climate landscape.

Key Criteria for Climate Transition Strategies

- All FGC climate-related strategies will aim to generate long-term capital growth through investment in equity securities that contribute directly to climate change mitigation and/or are leaders in their respective industries regarding climate change preparedness (with credible transition plans).
- Determination for inclusion will be based on a proprietary, in-house assessment of climate-readiness and opportunities.
- Portfolio holdings must also meet our requirements related to overall quality, sustainability of growth, and reasonable valuation.

Figure 1: FGC Team's Investment Approach to Climate Transition*



Inclusion: Companies that are determined to be leaders with regards to risk positioning, opportunities, and preparedness for climate change.
**Source: State Street Global Advisors*

Conclusion

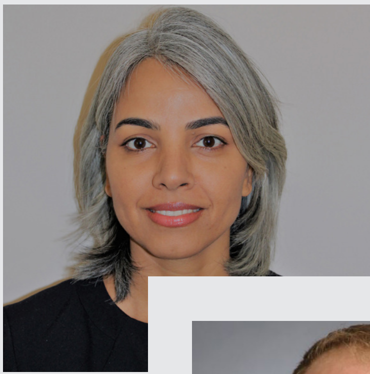
We see the world at a tipping point. Governments, countries, corporations, and investors are coming into alignment at a pace not seen in the past, in a determined response to reduce greenhouse emissions and achieve net zero objectives.

To discern the winners and losers in this evolving climate-related landscape, the FGC team believes an active, forward-looking, and long-term approach, based on in-depth fundamental analysis, is a necessity. This should include an assessment of known climate risks as well as corporates' readiness for climate transition.

A ROADMAP FOR ASSET ALLOCATORS TO ACHIEVE NET ZERO PORTFOLIO EMISSIONS

Michael Craig, *Managing Director, Head of Asset Allocation, TD Asset Management, and*
Priti Shokeen, *Vice President & Director, ESG Research & Engagement, TD Asset Management*

Priti Shokeen



Michael Craig

The investment management industry is currently undergoing a radical change on par with William Sharpe's contributions to investing in the 1960s. Sharpe developed the Capital Asset Pricing Model which described the relationship between systematic risk and returns which continues to be the focus of investors today, albeit using a variety of analytics.

As the industry evolves in the 21st century, and climate change becomes a growing focus and evolving fiduciary responsibility,[1] investors will need to consider a new measure of the robustness of their portfolios – carbon emissions. If society is to meet the goals set out by the Paris Accord in 2015, it will be critical for asset owners and capital allocators alike to ensure that the carbon footprint of their investments align with the objectives set out in 2015.

More than just risk

The goal of this article is to set out a roadmap for asset allocators to achieve this within their own organizational structures at their client directives. While "net zero" is an overarching target, political, organizational and competing frictions will emerge. Not unlike the shift in thinking after Sharpe's contributions required investors to begin considering risk, we are again adding a constraint to investors. A constraint that will continually tighten and has already begun changing and redefining the opportunity set of appropriate investments.

For the asset allocator, there are three broad strategic steps that should be considered when pivoting to a carbon neutral portfolio.

- Problem statement – What is the objective?
- Measurement and governance – How do we measure progress? What infrastructure is in place to ensure this progress is occurring?
- Strategy – What tools and investment strategies do we have to achieve this?

Problem Statement - The world needs to emit net-zero carbon dioxide in the atmosphere by 2050 if there is any hope to cap the global average temperature increase to 1.5 degree Celsius. Some experts warn us that we are already beyond that point and more ambitious targets are needed. Governments, companies and investors alike will need to align to this target to make this a reality. For asset managers, this translates into working with clients to integrate their net zero commitments and climate objectives into investment portfolios aligned to net zero by 2050. For investors and their portfolios, using some simple math, this equates to a carbon reduction of approximately 7.8%[2] per year in portfolios until 2050. Long term targets like this need to be accompanied by clear short- and-medium-term targets to keep us on track.

1 *Climate Change Legal Implications for Canadian Pension Plan Fiduciaries and Policy-Makers, McCarthy Tetrault, May 2021*
2 *The figure can be subject to change based on accelerated reduction targets.*

Measurement and governance – Without measurement, investors have no compass as to the baseline carbon intensity of a multi-asset portfolio and whether it is improving or deteriorating over time. Although carbon accounting has many more proof points to develop, the tools and methodologies

currently available to investors are a good starting point. To measure our intensity[3], we use the weighted average carbon intensity (tons CO_2/\$M Sales) denoted as capital Epsilon for each security i. To measure at the portfolio level, we summarize as follows:

$$\sum_{i=0}^{n} W_i E_i = \textit{Weighted Average Carbon Intensity of Portfolio (CIP)}$$

$$W = \textit{percent weight for each security } i$$

$$E = \textit{carbon intensity for each security } i$$

For asset allocators, it is typical to hold multiple funds that roll up into multi-asset portfolios. So, to measure the weighted average carbon intensity for a pool the process can be repeated, substituting underlying securities for funds in the equation. For this analysis, securities would include equities and corporate bonds. Securitized, Government and Supranational bonds would be excluded from the analysis until robust methodologies are created.

This gives us our starting point, and from here we can plan out exactly the CIP we want to target over the next few years. At TD Asset Management Inc. (TDAM) part of our oversight process includes presenting to our Chief Investment Officer on a quarterly basis the absolute performance, relative performance and risk of the multi-asset portfolios we manage. This oversight will evolve such that it will include a quarterly timeseries of the CIP for the pools we manage.

Strategy – With our objective, measurement of whether we are achieving that objective, and governance of that objective, we now need an investment strategy to balance this goal while also considering returns and risk. On this front, we will propose three tools, none of which on their own will be enough but in combination should set the asset allocator up for success.

The first is **communicating our objectives with underlying managers**, who we expect will also be measuring their CIP vs the benchmark and having ongoing communications with companies held in their portfolios about their carbon emissions as per **TDAM sustainable investing and engagement approach.**[4] Moreover, the capital allocator must be transparent with the respective portfolio manager if an underlying portfolio's carbon emissions are too high, similar to conversations that occur around risk. This creates an incentive structure for underlying PMs to begin focusing on this outcome and adjusting their strategies accordingly, without being prescriptive.

The second tool to be employed is **direct investment in assets that are deemed carbon neutral or carbon-reducing**. In our work this has led us to allocate to infrastructure where capital is directed at new energy sources, such as wind and solar as well as real estate where the teams focus has been on LEED Platinum structures.

The final tool we can potentially employ is purchasing carbon emissions futures. This is not a long-term solution, but one that can bridge the gap between our actual and target CIP. Carbon emissions futures give the right to the holder to emit a certain amount of carbon dioxide. Carbon trading systems are a proven approach to limiting carbon output by putting a price on pollution which otherwise would be a negative externality. As demand for carbon futures shifts with asset managers entering the market this will, all else equal, raise the cost of polluting and provide monetary incentive to industry to develop technologies and adapt processes to reduce their carbon footprint.

Conclusion

These strategies are not exhaustive but provide a starting point for asset allocators to work with clients and develop a framework around net-zero commitments. Climate change is arguably the greatest threat to humanity, and one that will require governments, corporations and households working together to change their behaviors and activities. Asset owners have a responsibility to lead this change, both for the climate but also in the interests of their businesses and various stakeholders.

3 *There are several metrics available to measure and evaluate portfolio carbon emissions. For asset allocation purposes, the weighted average carbon intensity allows for comparability and consistency between equity and fixed income portfolios of various sizes. There are other metrics available for applicable use cases, e.g., financed emissions metrics that calculate absolute or intensity-based emissions for a client's portion of 'ownership'.*

4 https://www.td.com/ca/en/asset-management/documents/investor/PDF/about-managed-assets-program/Sustainable-Investing-Approach-EN.pdf

NET ZERO AND THE ENHANCED APPROACH TO EM EQUITIES

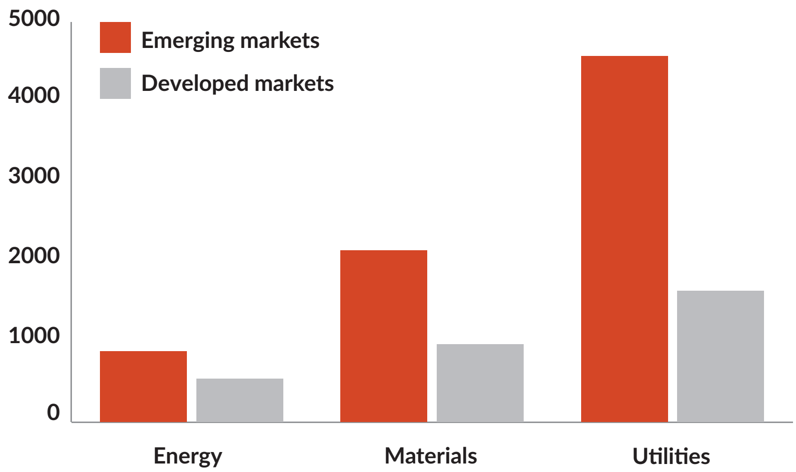
The Effect of Adding a Climate Objective on Risk and Return

Toby Warburton, *Head of Portfolio Management, Active Quantitative Equity, State Street Global Advisors*
Chen He, *Senior Quantitative Equity Research Analyst, Active Quantitative Equity, State Street Global Advisors*

As investors look to build climate-aware portfolios and consider how best to meet Net Zero[1] objectives, we in State Street Global Advisors' Active Quantitative Equity (AQE) team believe it is important that investors pay particular attention to their emerging markets equity allocation.

First, carbon dioxide emissions are typically concentrated in the Energy, Materials, and Utilities sectors, which currently make up 15% of the market cap of emerging markets (EM). They make up only 11% of the market cap of developed markets (DM).[2] Though this difference may not seem significant, because 81% of EM emissions come from these three sectors,[3] the higher weighting is meaningful. See Figure 1.

Figure 1: Carbon footprint in Energy, Materials and Utilities. Tonnes of CO_2 emission per USD million revenue



Source: TruCost, State Street Global Advisors, as at 30 June 2021

Second, in addition to the higher weight in higher-emission sectors, the intensity of the emissions is much higher on a like-for-like basis in EM versus DM. If we aggregate the CO_2 emissions across stocks in our investable universe of EM and DM stocks in AQE, we see a stark pattern. Despite being only 12% of the combined world's market cap, EM names produce 46% of the CO_2 emissions.

These structural elements are unsurprising, as emerging markets are often associated with rapid growth in industrialisation, fixed assets, and infrastructure, resulting in significant energy and power needs. Often these needs are met by older power plants, older technologies, and less clean energy generating capacity than that used in developed markets, resulting in proportionally greater carbon footprints. This also means that the emerging market segment should not be overlooked, and that adding a sustainable climate approach to an EM allocation can be disproportionately effective as investors transition to a lower-carbon portfolio or move along the path to net zero.

EM Enhanced Strategies[4]

Enhanced strategies, as we approach them in our AQE team, seek to outperform their cap-weighted benchmarks, but take relatively low active risk – typically around 1% per annum. This is much lower than a typical active manager and similar

1 Net Zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere. It is international scientific consensus that, in order to prevent the worst climate damages, global net human-caused emissions of carbon dioxide (CO_2) need to fall by about 45% from 2010 levels by 2030, reaching net zero around 2050.
2 Source: State Street Global Advisors, MSCI, GICS, as at 30 June 2021.
3 Source: State Street Global Advisors, TruCost, as at 30 June 2021.
4 This document provides summary information regarding the Strategy. This document should be read in conjunction with the Strategy's Disclosure Document, which is available from State Street Global Advisors. The Strategy Disclosure Document contains important information about the Strategy, including a description of a number of risks.

to that of the median index manager.[5] Unlike an indexed approach, the small amount of active risk or tracking error that Enhanced strategies deliver is purposeful and designed to offer the opportunity to outperform the index. Enhanced strategies therefore sit in a sweet spot: generally low tracking error; the opportunity for positive excess returns; and low cost compared to active managers. (Their slightly higher tracking error compared to indexed portfolios does mean that Enhanced approaches tend to be exposed to slightly greater benchmark-relative risk versus their indexed counterparts.) The approach aims to offer active market participation in an information ratio- and fee-efficient manner, and has garnered significant interest for EM equity investors looking to get more from their core allocation.

EM Sustainable Climate Enhanced Strategies

We investigated the changes to the risk and return profile of an EM Enhanced portfolio that would be caused by the achievement of achieving four objectives related to key climate metrics. The objectives (measured against the benchmark) were: a reduction of: carbon intensity by 50%[6]; fossil fuel reserves by 50%[7]; and "brown" revenues by 50%[8]; and an increase in "green" revenues by 100%.[9]

Our expectation was the natural tracking error of an Enhanced fund, and the broad diversification of its holdings, would allow us to accommodate an additional climate objective without significantly increasing risk or decreasing the returns opportunity.

Our research goal was to determine whether the unique risk and return advantages of enhanced management could be maintained when climate objectives were integrated within our existing framework. This would represent an information ratio- and carbon-efficient approach. We're pleased to report that, by utilising the natural active risk within the enhanced framework, we were able to integrate the climate objectives with only a marginal change in the overall tracking error relative to the benchmark. Importantly, we were able to achieve all these objectives without taking significantly larger country or sector positions relative to the benchmark than we take in the base strategy.[10]

Whilst the realised active risk of the two approaches is very close, the cost of the climate constraints did come in terms of a small increase in average ex-ante, or expected risk. In general, the results of our research suggest that it is possible to construct an Enhanced emerging markets fund with a climate objective that is generally consistent with the risk and return characteristics of an EM Enhanced strategy.[11]

This analysis shows that there are tangible steps that investors can take today to reduce the climate impact of their investments. Our approach to meeting the climate objective will evolve over time, as science, data, and green technology develop.

5 *Past performance is not a reliable indicator of future performance. Source: State Street Global Advisors, as at 31 July 2021.*
6 *Measured as direct emissions and first-tier indirect CO_2 emissions in metric tons per million dollars of revenue, as provided by TruCost.*
7 *Measured as metric tons of CO_2 emissions if proven and probable fossil fuel reserves were burned, as provided by TruCost.*
8 *Measured as percentage of revenues derived from extraction or power generation from fossil fuels, as provided by TruCost.*
9 *Measured as percentage of revenues contributing to the transition to a green economy, as provided by FTSE Russell.*
10 *The complete analysis, including the detailed methodology and back-testing approach, can be found at https://www.ssga.com/us/en/institutional/ic/insights/net-zero-and-the-enhanced-approach-to-em-equities*
11 *State Street Global Advisors does not currently manage actual assets in any emerging markets Enhanced strategy. A complete list of the firm's composites and their descriptions is available upon request.*

SOVEREIGNS AND ESG: TAKING A STANCE IN A COMPLICATED WORLD

J.P. Morgan Asset Management propose three common principles to help investors assess the ESG characteristics of sovereigns with a holistic and data-oriented approach.

Janet He, *Research Analyst and* ***Fan Wu,*** *Portfolio Manager, J.P. Morgan Asset Management*

Janet He

Fan Wu

Sovereign debt is one of the largest and most liquid markets in the world, with over USD 60 trillion outstanding.[1] Yet implementing an environmental, social and governance (ESG) framework within the space brings a unique set of challenges. We propose three common principles to help investors assess the ESG characteristics of sovereigns with a holistic and data-oriented approach.

1. ESG factors are important drivers for economic performance and impact financial risk and return.

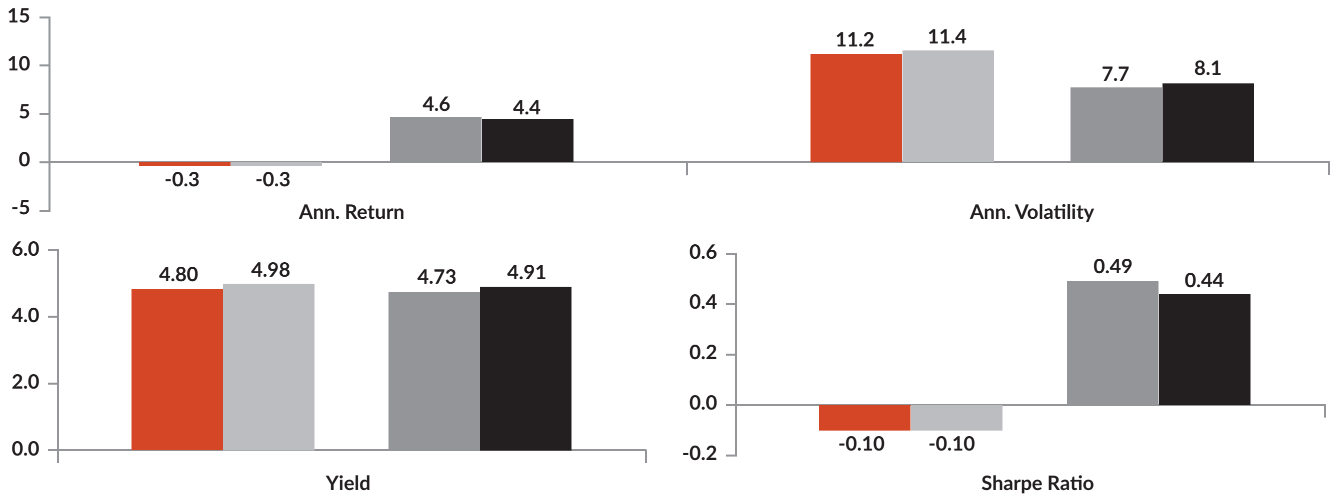
We strongly believe that integrating ESG factors is critical for better investment outcomes. Good governance, strong institutions and low levels of corruption have been long identified as drivers of economic growth and lower financing costs.[2] Intuitively and empirically, we understand that countries that provide better social conditions tend to see better economic outcomes. Income equality, gender balance, human development and demographics all play a role in a country's long-term growth.[3] And, even before tracking carbon emissions became commonplace, we understood that countries reliant on commodity exports tended to be vulnerable to cyclical commodity prices and rent-seeking behaviour. ESG factors supplement conventional credit analysis, picking up information that is not captured by traditional credit risk analysis, with a long-term focus.

Even if one is sceptical about the relevance of ESG factors today, their importance is only growing. Governments are broadly adopting policies that will require greater disclosure on ESG metrics and penalise poor ESG practices (for example, carbon emissions taxes). Investors are reallocating capital toward issuers with stronger ESG characteristics, and demanding progress.

While it's been widely demonstrated in the equity space that ESG approaches do not come at the cost of returns,[4] fixed income investors have been more sceptical as credits with lower ESG scores tend to have higher yields. Specifically for sovereigns, we can look at the example of J.P. Morgan's suite of ESG indices compared to its traditional emerging market debt indices (Figure 1). The ESG versions of the indices have been able to demonstrate similar returns, with incrementally lower volatility. In developed markets, higher ESG scores have historically been correlated with lower drawdowns in times of market stress (Figure 2).

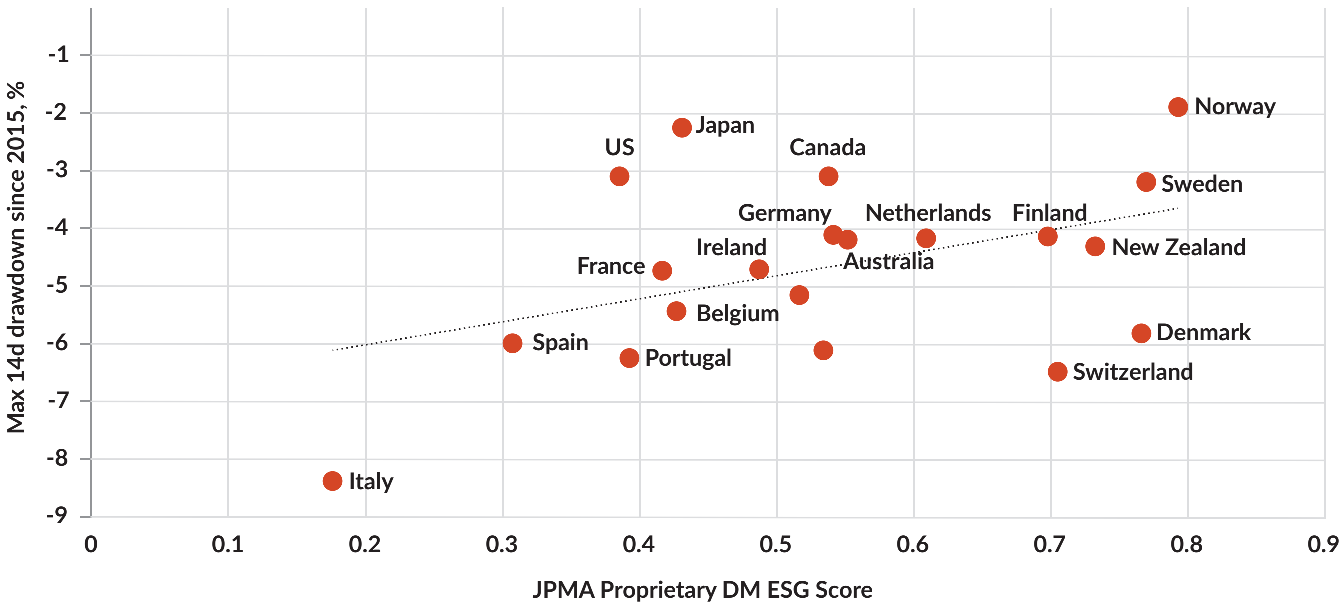
1 ICMA, August 2020. https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/Secondary-Markets/bond-market-size/
2 Governance, Corruption & Economic Performance. George T. Abed and Sanjeev Gupta. https://www.researchgate.net/profile/Sanjeev-Gupta-9/publication/234791577_Governance_Corruption_Economic_Performance/links/00b7d520d3e3c53a2a000000/Governance-Corruption-Economic-Performance.pdf
3 Trends in income inequality and its impact on economic growth. https://www.oecd.org/newsroom/inequality-hurts-economic-growth.htm
4 https://www.unpri.org/pri-blog/esg-factors-and-equity-returns-a-review-of-recent-industry-research/7867.article

Figure 1: EM ESG indices have been able to demonstrate similar returns to traditional indices with lower volatility over the long run



Source: J.P. Morgan; data as of 30 June 2021. Return and volatility calculations from 31 December 2012 to 30 June 2021. EM Local Sovereign Index = GBI-EM Global Diversified. EM USD Sovereign Index = EMBI Global Diversified. ESG Index created by J.P. Morgan excludes certain sectors, low scoring ESG names and UN Global Compact violators, and increases weights to green bonds. More details provided here: https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/markets/composition-docs/pdf-30.pdf

Figure 2: Incorporating ESG considerations for DM sovereigns helps to protect against drawdowns



Source: J.P. Morgan, Bank of America Merrill Lynch, J.P. Morgan Asset Management; data as of August 2021. Drawdown calculated based on J.P. Morgan and Bank of America Merrill Lynch country sovereign debt index.

2. Using a holistic array of internationally regarded data sources helps guard against bias.

When investing in sovereigns, it is impossible not to consider politics, which often involves bias. We believe considering a variety of perspectives and looking at a wide array of reputable, internationally regarded data sources is a good start to forming an objective view.

A common complaint about ESG analysis is that data can be difficult to source. Some sovereign data is in fact more readily available than corporate data given the multitude of multinational organisations and NGOs – including the World Bank, the IMF and the United Nations – that have been tracking country level data for decades. However, just because the data is available does not mean it is easy to use and interpret, or that it is accurate or unbiased. Timeliness is a common issue as most ESG data is updated at best annually and often with multi-year lags. This can make assessing progress in some areas, such as climate change policy, particularly difficult. Qualitative assessments of policy translated into quantitative rankings, such as the World Bank's Governance Indicators or Germanwatch's Climate Change Performance Index, can help.

Despite the shortcomings of the data available today, we believe there is enough information for sovereign investors to assess general trends and make some cross-country comparisons.

3. Scoring is only one part of any approach – investors also need to take into account trajectory and engagement.

Scoring frameworks serve an important purpose: they provide a simple understanding of issuers as "better" or "worse". Third-party scores also provide an independent assessment for investors, similar to the role of a credit rating agency. Yet third-party scores can differ widely and, as yet, there is no industry standardisation. Scores may also lack transparency and may not be aligned to a specific investor's values and objectives.

A qualitative assessment can complement a score-based approach and incorporate higher frequency views and other considerations not well captured by data. Many sovereign ESG scores exhibit an income bias (richer countries tend to have higher ESG scores).[5] While this may be a desirable feature as sustainable investors are likely to want to invest in countries that provide a better standard of living, it can also have the harmful effect of diverting financial flows away from countries that may need it the most. Income bias can be addressed by comparing countries within their peer income groups or by looking at trajectory and momentum, not just current levels.

As with corporates, engagement is critical, but it can be more nuanced in the sovereign space. Engagement can take a variety of forms, including helping governments finance specific sustainable projects; meeting with government officials regularly to review progress on climate goals; and participating in industry groups to collectively advocate for better disclosure and improved practices from state-owned companies.

Conclusion

Although a wide range of sovereign ESG data is available, it can be patchy, biased and challenging to interpret. Third-party scoring can help to provide a simple understanding of a country's ESG characteristics, but may lack transparency – and there is, as yet, no industry standard. We believe a proprietary approach that includes trajectory analysis and engagement, as well as scoring, is required to gain a more complete picture.

This is a short version of a longer paper examining the challenges of ESG analysis in the sovereign debt space, looking at ways to overcome those challenges and introducing J.P. Morgan Asset Management's proprietary sovereign ESG scoring framework.

To read the full paper click here.

5 World Bank, *A New Dawn Rethinking Sovereign ESG*. https://documents1.worldbank.org/curated/en/694901623100755591/pdf/A-New-Dawn-Rethinking-Sovereign-ESG.pdf

CLIMATE CHANGE AND THE ROLE OF INDEX INVESTING

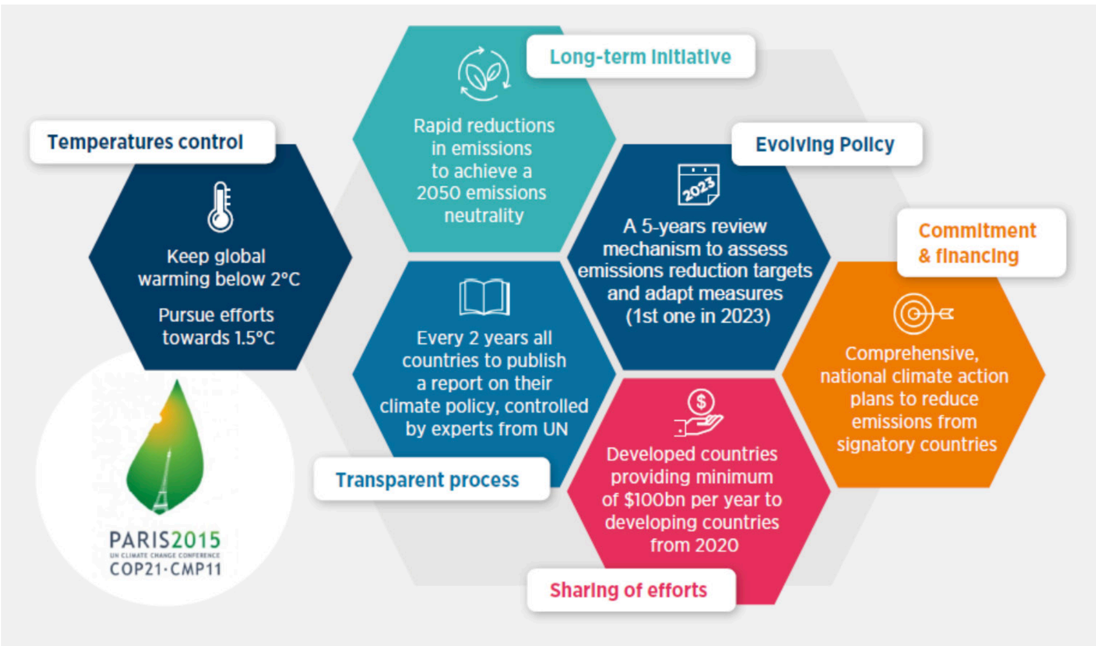
***Matthieu Guignard,** Global Head of Product Development and Capital Markets, Amundi ETF, Indexing & Smart Beta*

As our attention turns to COP26, the urgency of the issue of climate change has never been more palpable. Between 2011 and 2020, we experienced the warmest decade since records began.[1] Years of unsustainable practices pursuing economic growth at any cost have brought our planet to breaking point. Today, few would disagree that the need to take action on climate change is pressing and we have only ten years, at most, before reaching the point of no return. This has triggered a rapid acceleration in the adoption of climate-focused investment solutions throughout the world, and particularly so in Europe. However, as we all seek to take necessary steps to curb climate change, what role does financial services play? And how can investors take steps in the right direction?

Context of climate investing

Signatories of the Paris Agreement at COP21 in 2015 committed to a common goal of limiting global warming to within 2°C of pre-industrial levels while striving to keep it to 1.5°C. The 2015 conference[2] highlighted the urgent need

Figure 1: The Paris Agreement: first universal climate agreement



Source: Amundi ETF, Indexing and Smart Beta as of January 2021

1 World Meteorological Organization, 14 January, 2021
2 See https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

for joint and international climate action to achieve a rapid reduction in emissions in order to reach emission neutrality by 2050. It also raised public awareness of the need for rapid and long-term climate and environmental action to meet the EU's international commitments to tackling climate change and to reach a more sustainable economy. A massive mobilisation of all sectors and economic actors is now required, with incentives to redirect investments and capital flows, whether public or private, to less carbon-intensive business activities.

Regulation, a driving force in climate indexing

In keeping with the objectives of the Paris Agreement, the European Union made sustainable development a top priority in its economic and financial policy. To this end, in 2018 the European Commission set up a group of technical experts (TEG)[3] to work on the development of a framework of measures to steer capital markets and investments more generally towards an ecological transition.

In March 2018, in collaboration with the TEG, the European Commission adopted and published its "Action Plan on Sustainable Finance" (the "EU 2018 Action Plan"),[4] an ambitious and innovative plan bringing together ten key actions to promote sustainable finance. As part of this programme, the Benchmark regulation (BMR) was updated with two key initiatives:

- The creation of two new categories of benchmark under the BMR – Climate Transition Benchmarks (CTBs) and Paris-aligned Benchmarks (PABs)
- Sustainability disclosure requirements for benchmark administrators regarding the methodologies and ESG characteristics of ESG indices

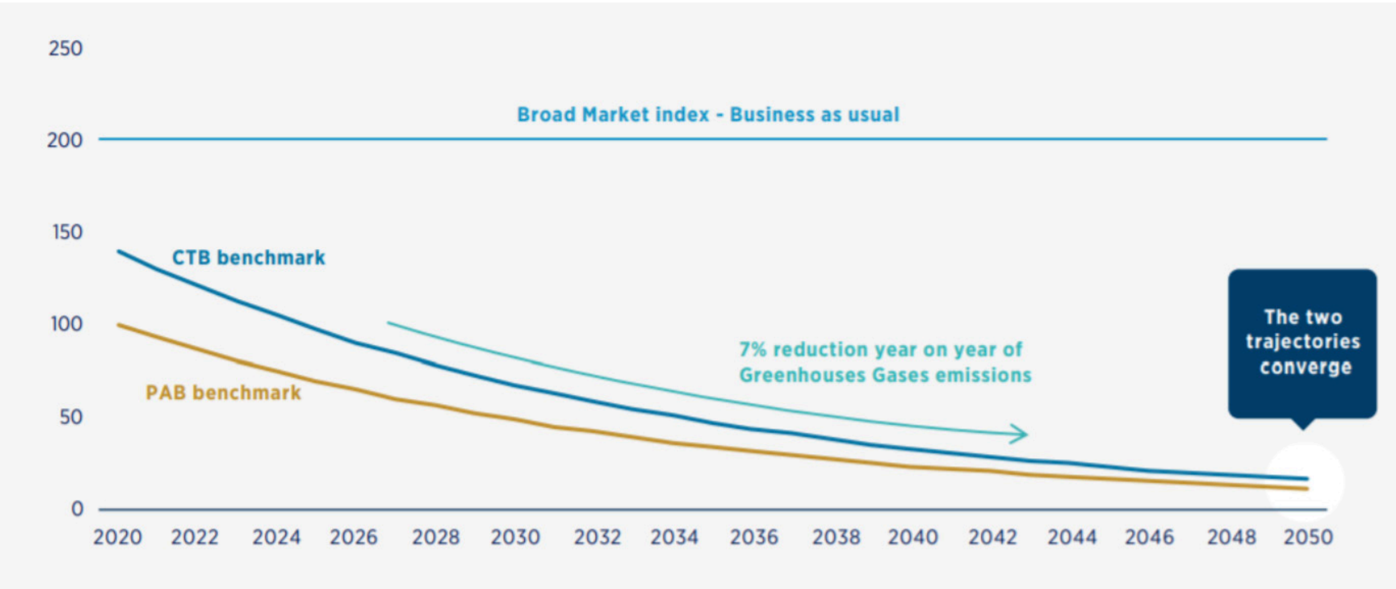
Ultimately, the European Commission's objective when updating the BMR was four-fold; to make the benchmarks more comparable, to provide a useful investment tool for investors, to increase the transparency of investment impact and to discourage green washing.[5]

The importance of climate indices

The establishment in 2020 of the new climate indices within the EU regulation acknowledged the importance of redirecting passively invested assets in addressing the climate emergency. They also afforded index investors a comprehensive and transparent index approach to addressing climate change.

We believe that the democratisation of climate investing is essential both for investors and for addressing climate change. We also believe that the impact of low-carbon investing will increase as it becomes more widely implemented. As indexing offers the benefits of simplicity and cost efficiency, the new indices using the European benchmarks will allow extensive adoption by index investors.

Figure 2: CTB and PAB indeces have the same long-term objectives but different carbon footprint trajectories
Carbon emission intensity, tCO_2/mlnUSD sales



Source: Amundi as of end of March 2021, for illustrative purpose only

3 For more information: https://ec.europa.eu/info/publications/sustainable-finance-technical-expert-group_en
4 Source: European Commission https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en, March 2018
5 Source: EU Technical Expert Group on Sustainable Finance, Final Report on climate and benchmarks' ESG disclosures, September 2019

Looking at the EU climate indices

The European Commission introduced two different benchmarks with different climate intensities to allow investors to incorporate climate in a way that suits their objectives. [6] The Climate Transition Benchmark (CTB) and the Paris Aligned Benchmark (PAB) must comply with strict minimum requirements to achieve their climate objectives.

Both types of index require the exclusion of companies that have a negative impact on key environmental aspects, such as climate change, pollution, marine protection and biodiversity, as well as companies that are involved in controversial weapons.

Beyond this, the primary differentiation between the two index labels relates to their respective levels of climate intensity. The PAB integrates a more stringent carbon footprint reduction and a restricted investment universe than the CTB – we can see this difference visually in figure 2.

Beyond this, the label also requires limits on specific activities considered high carbon emitters such as coal exploration and processing or electricity generation.

As with all other benchmarks, and in line with BMR requirements, the benchmark administrators of CTB and PAB indices must comply with a high level of transparency on their methodologies, through the formalised reporting accessible to investors. This reporting is, however, much more detailed than that required for other indices.

It includes:

- Information on the methodology and data used.
- Reporting on the decarbonisation strategy of the index as well as declaring if these objectives are not achieved, the reasons for this failure, as well as the means implemented in the following period to remedy the problem.

Significantly, the two climate benchmarks incorporate new attributes to allocate capital towards the most climate-virtuous companies:

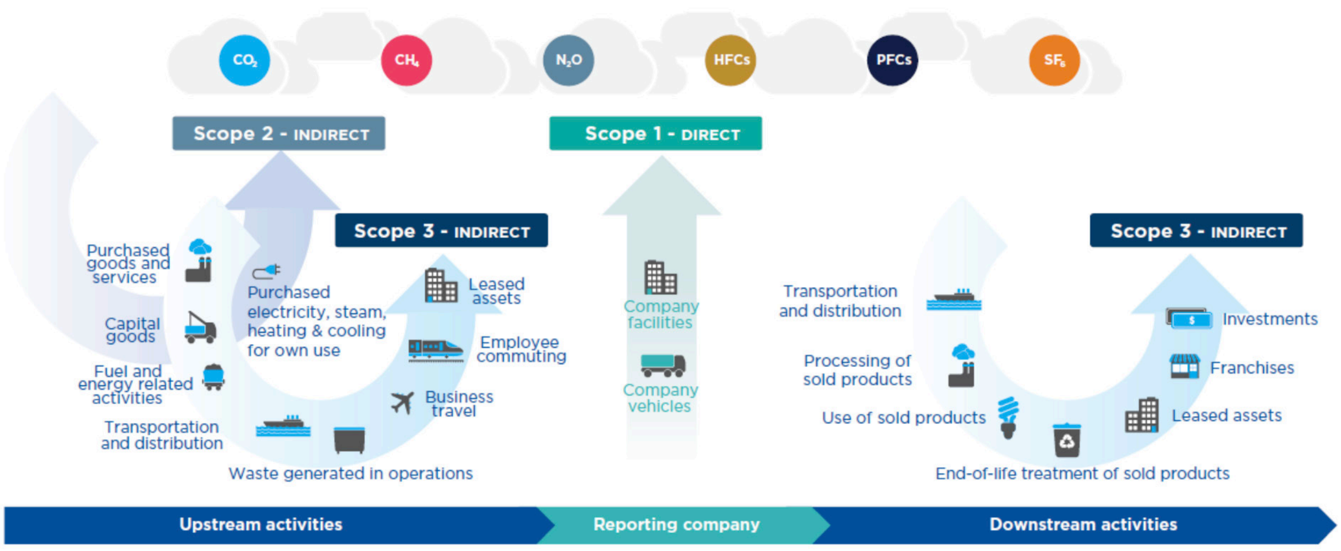
- They integrate a backward-looking approach, using reported historical data, and focus on Scopes 1, 2 and 3 upstream (supply chain for operations) and downstream (products) greenhouse gas (GHG) emissions with an explicit allocation towards the most climate virtuous companies – see figure 3 for an explanation of Scopes 1, 2 and 3.
- They take into account companies' climate strategies over the long run and their forward-looking commitment towards carbon emission reductions.

Together, the benchmarks offer a structure for index providers and asset managers to facilitate widespread, cost-effective climate investing.

An evolving sector

Low-carbon investing is not entirely new, and we see these new indices as the "second generation" and part of an evolution in climate investing.

Figure 3: GHG Protocol scopes and emissions across the value chain



Source: Amundi

6 *Source: European Commission* *https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-climate-benchmarks-and-benchmarks-esg-disclosures_en*

For example, Amundi co-developed the MSCI Low Carbon Leaders index series with FRR and AP4 in 2014. At this time, the data available allowed us to consider historical direct greenhouse gas emissions. This second generation of climate change indices, reinforced by the regulatory framework of the CTB and PAB, provides a more comprehensive approach to investing for positive impact by considering all GHG emissions including scope 3 and being in a position to consider these from an historical and future perspective.

Using one of the new CTB or PAB climate change indices gives investors comfort in knowing that the measurement of the carbon intensity is interpreted through the full value chain and that the management of the index takes a more proactive and future focused approach.

Delivering on expectations

It is now a little over a year since the introduction of the CTB and PAB labels and the launch of the first funds and ETFs managed to indices meeting their requirements. So for many the question will be, how are they working and do they really offer a reduction in carbon versus the universe?

Amundi launched its first PAB ETF, tracking the EURO iSTOXX Ambition Climat PAB Index, in June 2020, quickly followed by a range of equity CTB and PAB ETFs. In assessing the impact of these strategies we take a look at the two climate-labelled Amundi ETFs that have attracted the most investor interest – these ETFs both offer World equity exposure, tracking the MSCI World Climate Change Paris Aligned Select Index and the MSCI World Climate Change CTB Select index.

The primary area we look at based on the requirements of the benchmarks is the index carbon emissions and the index carbon intensity as shown in figure 4 which shows a marked reduction versus the parent index.

Investors have many reasons to choose climate ETFs – it is for this reason that we believe it is important to offer a range of solutions to meet different needs. For example, for some investors the priority in selecting a climate ETF could be managing climate-related risks such as stranded assets.

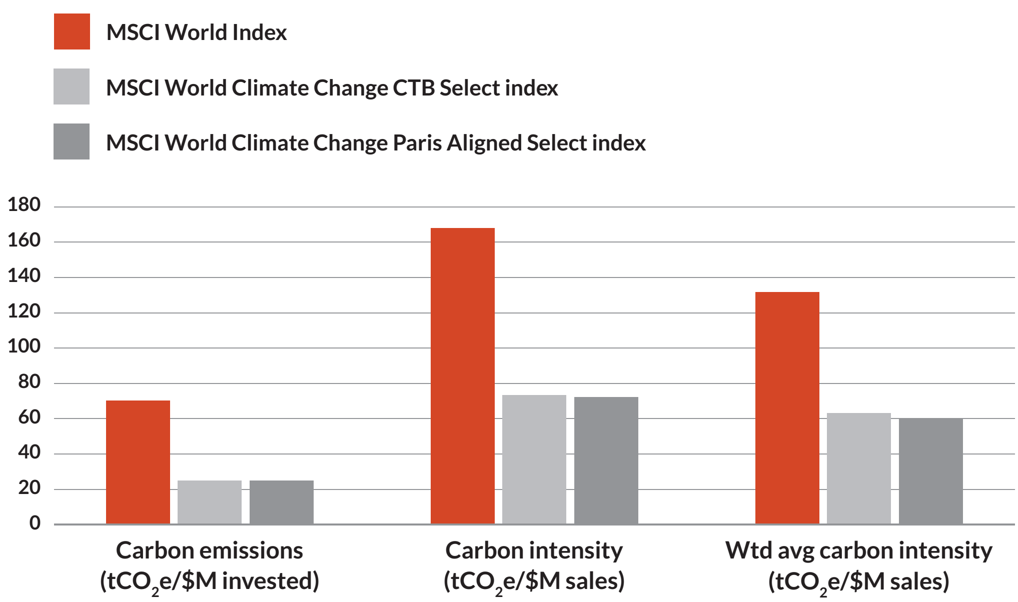
From that perspective, the data shown in figure 4 demonstrates a clear reduction in exposure to companies that:

- own coal, oil or natural gas reserves used for energy purposes (fossil fuel reserves)
- derive some of their revenue from thermal coal mining or power generation
- derive revenues from activities such as shale gas, oil sands or coal bed methane.

These are key industries that may suffer premature write-downs or devaluations as we move from fossil-fuel led power to climate-friendly solutions.

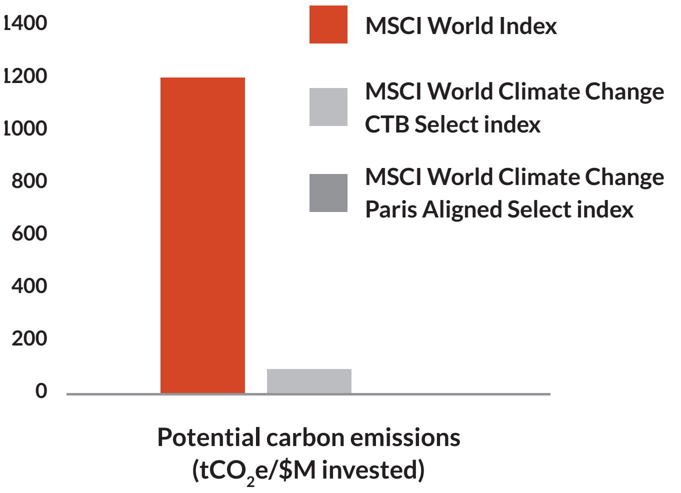
In figures 5 and 6 we see the impact of this on the potential carbon emissions and the stranded assets exposure of the three indices: the CTB and PAB indices are significantly lower than the universe.

Figure 4: Climate Footprint Metrics



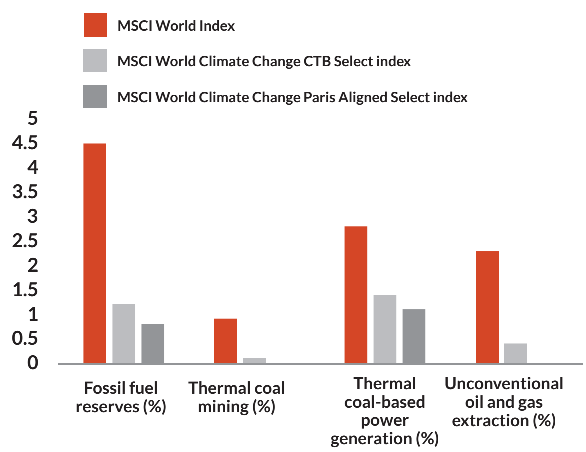
Source: MSCI as of 30 July 2021

Figure 5: Potential CO_2 Emissions



Source: MSCI as of 30 July 2021

Figure 6: Stranded Asset Exposure

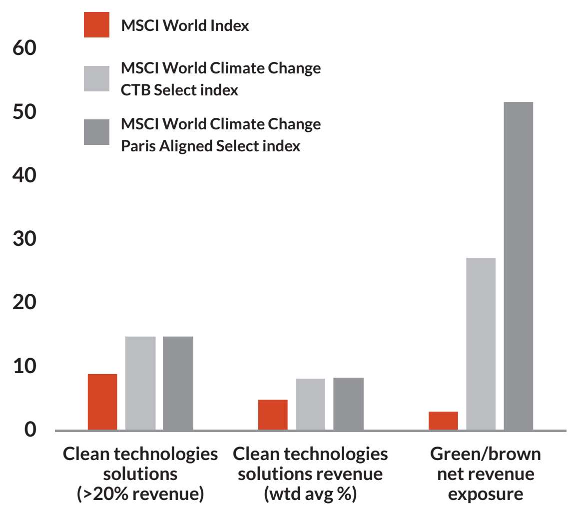


Source: MSCI as of 30 July 2021

Another reason for investing in climate may be an investor's belief that over the long-term the sector offers return opportunities related to innovation and development.

As we see in figure 7, the CTB and PAB indices have an increased exposure to clean technology solutions where companies are deriving their revenues from any of the five clean tech themes: alternative energy, energy efficiency, green building, pollution prevention, or sustainable water. It is also clear that the ratio of the weighted average clean technologies solutions revenue (%) or "Green Revenue" to the weighted average fossil fuel revenue (%) or "Brown Revenue" differs between the indices, with the PAB index having a significantly higher weighting towards green revenues than the universe. This exposure could offer potential for future innovation in climate-friendly sectors.

Figure 7: Exposure to Clean Technology Solutions



Source: MSCI as of 30 July 2021

Ultimately, these indices provide a more comprehensive approach for index investors to introduce climate investing into their portfolios. We have seen strong demand within the ETF sector and enthusiasm from investors who now have the choice of almost 50 different low carbon, fossil fuel free or climate change ETFs. These ETFs represent over $11.5bn in assets – 57% of which are flows we have seen in 2021.[7]

Amundi has a comprehensive range of PAB and CTB ETFs covering both equity and fixed income and a range of geographical exposures. For more information visit www.amundietf.com/climate.

7 *Source: ETFGI Global ESG ETF and ETP industry insights July 2021*

ASSESSING THE IMPACT OF CLIMATE CHANGE ON INFRASTRUCTURE PORTFOLIOS

Specialist international infrastructure asset manager InfraRed Capital Partners' ("InfraRed") collaborative partnership with Willis Towers Watson's ("WTW") Catastrophe & Climate Risk Management team has delivered a climate assessment solution which is improving the resilience of InfraRed's assets and developing its climate-related disclosures

Harry Seekings, *Head of Infrastructure*
InfraRed Capital Partners and ***Torolf Hamm***
Global Head, Catastrophe & Climate Risk Management
Risk & Analytics, Strategic Risk Consulting,
Willis Towers Watson

Harry Seekings

Torolf Hamm

What led to your decision to engage Willis Towers Watson to complete a climate change impact assessment?

Harry Seekings, InfraRed: InfraRed Capital Partners ("InfraRed") manages an infrastructure investment portfolio which impacts the lives of over 25 million people globally. From schools and hospitals, to roads and railways, windfarms, solar and power storage facilities, we own and manage the infrastructure that society relies on. With the stewardship of that essential infrastructure comes the responsibility to deliver positive outcomes for all stakeholders over the long term.

As our assets often have lifespans exceeding 50 or even 100 years, navigating climate change is a crucial part of delivering those positive outcomes for our stakeholders. There are two aspects to getting this right for us.

First, we need to make sure that these essential assets are resilient to the physical impacts of climate change, whether that be the increasing frequency and severity of weather events or slow-moving processes like sea level rises.

And second, we are committed to playing our part in the transition to a net-zero economy. In July 2021, we joined the Net Zero Asset Managers initiative, committing to achieving net-zero emissions for our portfolio by 2050, but more importantly, in the next year we will be setting 2030 interim targets for a proportion of our assets under management.

The climate change impact assessment was fundamental in furthering our understanding of our climate resilience and aligning our portfolio with the transition to net-zero, which ultimately informed our decision to formalise our net zero commitments. And Willis Towers Watson ("WTW") was the obvious partner for us, given the sophistication of their climate scenario models, the depth of their research network and the collaborative approach they adopt with both their direct clients and industry-wide climate initiatives. WTW's market-leading expertise was important, but what we valued even more was their ability to understand and adapt to our requirements. Working with WTW we were able to develop a final output which enabled us to quantify the climate-related exposures of our portfolio and importantly also provided actionable indications of how to improve the resilience of our assets.

Can you tell us how you assist clients like InfraRed to assess climate change risks and opportunities?

Torolf Hamm, WTW: Global asset managers such as InfraRed must act to protect the value of their portfolios. This means understanding and managing climate risk exposure in line with regulatory, reporting and disclosure requirements such as TCFD and managing both near-term exposure and systemic, economy-wide climate risks. The entire industry must take a strategic approach to manage climate risk in the real economy and become active stewards of the transition to a net-zero, climate-resilient economy.

Through this engagement, we worked with InfraRed to develop a long-term strategy to manage its climate-related risks and proactively engage in the transition to net-zero.

To help clients like InfraRed assess and address climate change risks and opportunities within their infrastructure portfolios, we provide a solid understanding of their risk profile based on current climate conditions as well as potential future climate scenarios for strategically relevant time horizons. We can then evaluate the financial impact of these risks and identify opportunities to be analysed and, where plausible, quantified (a key requirement of TCFD). Essentially, we recognize that both climate change and the transition to net-zero can present tremendous uncertainty. What we can offer our clients is insight to outsmart uncertainty, limiting downside risk and positioning themselves to make the most of opportunities resulting from the changes to come.

It’s essential to build a dataset that captures and helps model the physical climate risks for the portfolio and how these exposures are likely to change due to climate change. This portfolio level view can then be utilized to use deeper dive analysis to measure the financial impact (‘cost of risk’) associated to climate change for the most significantly exposed assets within the portfolio by using quantitative modelling analyses coupled with climate science. These ‘deep dives’ into the risks for these assets highlight climate adaptation and risk mitigation strategies.

It’s also essential to understand and assess threats and opportunities from the transition to a low carbon economy. It’s also worth evaluating their ‘flip side’; the opportunities associated with a ‘well below 2°C’ transition scenario. This typically focusses on a time horizon of up-to-2030, and for some of these risks, it’s possible to evaluate the financial impact of the identified risks and opportunities using enterprise risk evaluation techniques.

How has InfraRed used the outputs of the WTW assessment?

Harry Seekings, InfraRed: The WTW assessment has provided vital information on how our assets under management could be impacted by various climate change scenarios. We are using it to inform bespoke climate change management plans. These prioritise certain risks and opportunities, and adapt the physical asset or operational processes to improve the asset’s resilience. The assessment is also informing the conversations our management teams have with their clients, delivery partners, co-shareholders and other stakeholders. We’ve ensured the outputs are incorporated into asset risk registers and that they are discussed at portfolio company board meetings. At the A63 Motorway in France, for example, our portfolio company has undertaken a series of workshops in collaboration with the road operator, resulting in the development of a climate-related risk matrix and a prioritised resilience action plan.

Following the portfolio-level review, we also completed a deep dive analysis on the higher-risk assets to further assess potential exposures, financial impacts and available risk mitigation measures.

Finally, it’s enabled us to disclose an expert view of the climate-related risks to our investors, in line with TCFD recommendations. Transparent climate-related disclosures have been a key focus of ours. We want to ensure that our investors are aware of the potential financial impact of under-estimating climate-related risks and that we also hold ourselves accountable. As a result, we are TCFD supporters and we have already adopted TCFD-compliant reporting for our listed funds and we are now in the process of implementing this for our unlisted funds.

We are confident that these measures will drive improvement in the resilience of our individual assets and, as a result, of our portfolio as a whole.

How do you evolve your climate change models to take into consideration new information such as the most recent IPCC report?

Torolf Hamm, WTW: WTW constantly engages with academic research to assess our climate change modelling assumptions and to capture developments such as the IPPC report. WTW has invested proactively in the Willis Research Network for a number of years, a network of over 50 academic and other world-renowned institutions designed to examine topics that require targeted research – including modelling the impact of given climate hazards.

With science rapidly evolving in the space of analysing the various aspects of climate change, we recognize that it is essential to be closely in touch with these developments. WTW also chairs the Coalition for Climate Resilient Investment (CCRI), which brings together industries and leaders across the finance and investment value chain to develop practical solutions to advance climate resilience. The Coalition has grown to more than 70 members with over $11trn in assets, including institutional investors, banks, insurers, the World Economic Forum, the State of California, and governments of the UK, Canada, Jamaica and most recently Australia.[1]

Has working with InfraRed led to any improvements in your climate service offerings?

Torolf Hamm, WTW: We undertook this assessment in close collaboration with InfraRed, which helped shape a climate value proposition which met the needs of infrastructure type portfolios; one that is scalable to accommodate a large portfolio, yet detailed enough to arrive at tangible outputs that can be used to address climate-related risks at the individual asset level. This is key in working into frameworks such as TCFD, which demands measurable and actionable analysis of the financial risks associated with climate change.

For example, we appreciate that fund managers require visibility at an asset-level and the fund as a whole, whereas the business requires visibility of the portfolio's risk profile as a whole. It was therefore essential to develop a dataset that addressed the demands of the stakeholders involved across all levels of InfraRed's business. We re-thought our approach and developed a tool which generated the desired deliverables in an efficient manner. This forced us to think 'outside the box' by building strategic datasets, model where it mattered and to create automated reporting environments that allowed us to provide over 100 still very detailed reports on an asset location basis.

How will this exercise inform InfraRed's approach to new investment opportunities?

Harry Seekings, InfraRed: Climate change considerations have influenced InfraRed's investment strategy for many years; for example, we made our first renewable energy investment in 2009.

In 2020 we updated our investment processes to include a qualitative assessment of the physical and transition risks associated with a potential investment. This was key in shifting the mindset of our investment teams to ensure climate change was a key consideration when assessing investment opportunities.

We're now building on these processes in light of the WTW exercise, to ensure we complete more detailed climate risk assessments on new investments. These assessments will, for example, consider exposure to both physical and transition climate-related risks, which in turn will inform our technical due diligence and, where appropriate, valuations.

We will also leverage the experience generated from our existing portfolio as the management teams implement tangible actions on the ground to respond and adapt to the results of the WTW climate change assessment. Learning from and sharing knowledge between our portfolio and our investment due diligence processes has always been central to our active asset management approach.

Finally, across our strategies and funds we will continue to invest in assets that support the transition to a low carbon economy and are in line with our net-zero commitments.

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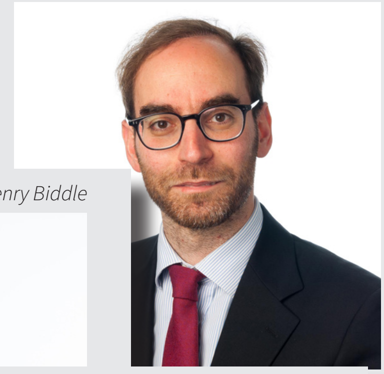
1 https://www.environmental-finance.com/content/market-insight/a-coalition-to-combat-climate-change.html

FINANCIAL INCLUSION: AN ESSENTIAL PART OF 'BUILDING BACK BETTER'

Filippo Alloatti, *Head of Financials (Credit);* ***Henry Biddle,*** *Portfolio Manager, Sustainable Global & US Small and Mid-Cap Equity;* ***Roland Bosch,*** *Engagement Professional, International business of Federated Hermes*



Filippo Alloatti

Henry Biddle

Roland Bosh

Financial inclusion is commonly defined as 'access to and use of formal financial services'. Despite considerable progress on reducing absolute global poverty over the last 20 years, worldwide, billions of people remain unbanked, uninsured and without assets or savings. We explore why financial inclusion should be an essential part of 'building back better', not just as a moral imperative, but as a significant economic opportunity which offers real benefits for society as a whole.

What's the issue?

Almost a third of adults globally (about 1.7 billion people) remain unbanked, half of whom are from the poorest 40% of the world population.[1] Many more are unable to access financial services like loans which are taken for granted in the developed world. Being excluded from the formal financial economy, or at least from access to credit facilities which could be deemed 'reasonable and fair' often creates a vicious circle, trapping people in a cycle of debt.

The problem isn't limited to the developing world. In the US, it is estimated that "financially vulnerable" households spend c13% of their income on unnecessary fees and interest vs c1% for those classified as "financially healthy".[2]

Why invest in financial inclusion?

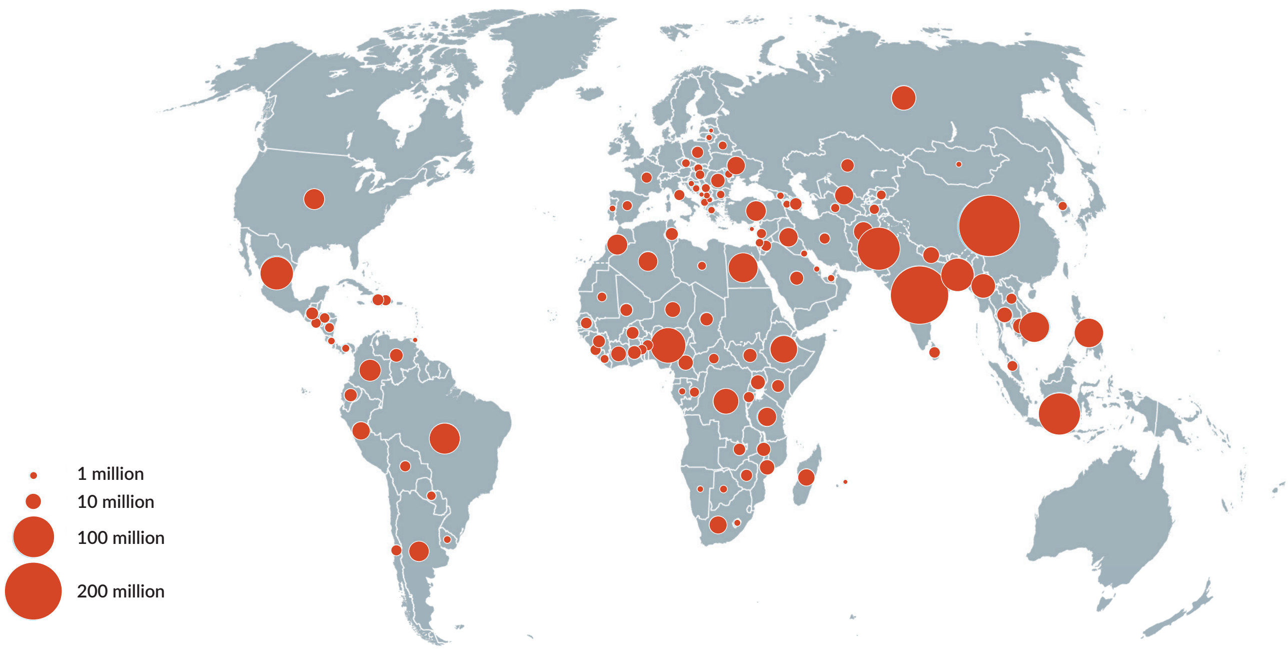
From an investment perspective, financial inclusion is attractive for a number of reasons, some obvious, some less so.

Clearly it delivers hugely positive outcomes for multiple stakeholders, helping to address a wide range of societal and economic issues which are becoming increasingly acute. From a less altruistic perspective, it offers a huge and varied opportunity set for investors. The types of businesses which can form part of a financial inclusion-focused portfolio include banks, insurers, homebuilders providing affordable housing, credit bureaus and of course fintech, which is providing innovative solutions to some extremely entrenched issues.

Financial inclusion also represents the opportunity to unlock unsaturated economies and access cheap, accelerating growth while building long-lasting relationships with consumers and communities. Within a broader portfolio, financial inclusion offers a great complement to broader "sustainable" themes. While many healthcare and environmental names sit on lofty multiples acknowledging the significant total accessible market ahead of them, banks and insurers exposed to emerging market growth often trade on low teen multiples

1 World Bank Group – Findex report – https://globalfindex.worldbank.org/sites/globalfindex/files/chapters/2017%20Findex%20full%20report_chapter2.pdf
2 https://www.theactuary.com/2021/01/13/insured-losses-natural-disasters-rise-2020

Figure 1: Unbanked adults by country in 2017.
Globally, 1.7 billion adults lack an account



Source: Global Findex database.
Note: data is not displayed for economies where the share of adults without an account is 5% or less.

and are less susceptible to valuation risk in an inflationary or rising rate environment. While the payment companies sit on higher multiples they have very high returns on equity, generate significant cash flow and tend to hold up well in market drawdowns.

What to consider

There is no single approach to investing in financial inclusion, however, there are various factors which should be taken into account when considering a possible investment in this theme. Is it materially inclusive? Can it offer sustainable growth? Does it have the margins to be able to invest in its business? If it's a case of providing capital, has that capital been tested historically against the cohort? And importantly, is the valuation attractive?

Opportunities for investing in financial inclusion exist across both equity and fixed income markets, although it is more challenging to find pure 'financial inclusion plays' in the corporate bond markets. Mastercard is an example of a leader in financial inclusion which issued a $600 million sustainability-linked bond earlier this year. We also see suitable opportunities in the US high-yield bond market, although these are harder to fit into the investing framework outlined above. We refer to them as specialised lenders and typically, but not exclusively, they are non-banks, i.e. they are not regulated by the US Federal Reserve.

The pandemic has shone a strong light on continuing financial inequality and at the same time offered a real opportunity to pivot towards investing in a fairer and more inclusive global economy. The rewards for doing so go way beyond those directly affected, from increasing political stability to helping address climate change, and from driving global GDP growth to contributing to strong returns from a well-balanced portfolio.

View the full report

CLIMATE FINANCE AND THE ROAD FORWARD

Bloomberg Professional Services

Climate change has long been a topic on the forefront of discussion across the globe, yet never has it seen such momentum as over the last year. Global average temperatures continue to rise, with 2020 tying with 2016 to be the warmest year on record, according to NASA's Goddard Institute for Space Studies. Covid-19-driven lockdown measures mean that emissions in 2020 were 2–12% lower than the preceding year. However, this temporary decline will likely have a limited effect in terms of mitigating the impact on climate systems as man-made emissions have been accumulating for centuries.
The impact of climate change on financial markets is becoming even more of a reality, as regulators, investors, and society as a whole are demanding more from the financial system enabling the fight against climate change, or at least not hindering it. Investors are realizing values and value don't have to be at odds with one another, and the numbers behind the climate finance movement show it will only continue its upward trend.

Government action taking shape

A growing number of governments have announced a target to reach net-zero emissions within the next 30–40 years. Indeed, many of these commitments have been made during a global pandemic, signalling a growing awareness of the risks posed by climate change.

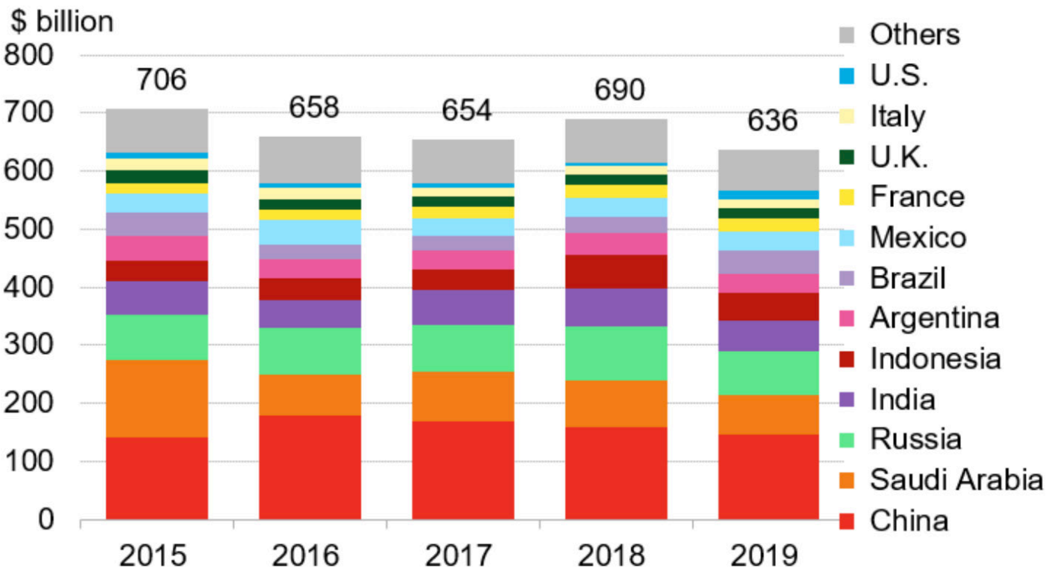
COP26 will kick off the first full pledging cycle, which was agreed in Paris in 2015, and will be the first official opportunity to discuss countries' climate plans known as 'Nationally Determined Contributions'. Parties must ratchet up the ambition of their pledges to avoid the worst effects of climate change. The NDCs submitted by end-2020 would put the world on course for global warming of more than 3 degrees Celsius this century, based on the UN Environment Programme's 2020 Emissions Gap Report.

There are three priority areas that governments are focusing on to combat climate change.

1. Phasing out existing fossil-fuel support: According to the BloomberNEF Climate Policy Factbook, G-20 governments provided $3.3 trillion of direct support for coal, oil and gas and fossil-fuelled power 2015–19. At today's prices, that sum could fund 4,232GW of new solar power plants — over 3.5 times the size of the U.S. grid. Further, given varying levels of transparency nations provide on such funds, these figures are probably an under-count. This support encourages the (potentially wasteful) use and production of fossil fuels. It can also distort prices and risks carbon 'lock-in'— whereby assets funded today will be around for decades, locking in high levels of future emissions. All of these factors hinder the climate transition. Eliminating fossil-fuel supports can be a slow and politically delicate process. However, other policies can be implemented to offset these supports without the same potential downsides. These include financial incentives for renewables and energy storage, capacity mechanisms in the power market, and 'just transition' strategies to support companies, workers and local communities affected by the shift from fossil fuels to cleaner technologies.

2. Advancing carbon pricing: More governments than ever are putting a price on emissions with the aim of deterring the use of carbon-intensive fuels and incentivizing cleaner technology. Absent a carbon price, polluters pay nothing for the long-lasting damage they cause to the environment. There are two main ways for governments to price carbon: market-based mechanisms such as emission-trading systems or fixed-price systems like taxes. The design features of an ETS or tax can differ significantly, as can the realized carbon price. Existing schemes vary greatly in terms of price levels, industries

Figure 1: Fossil-fuel support by G20-countries

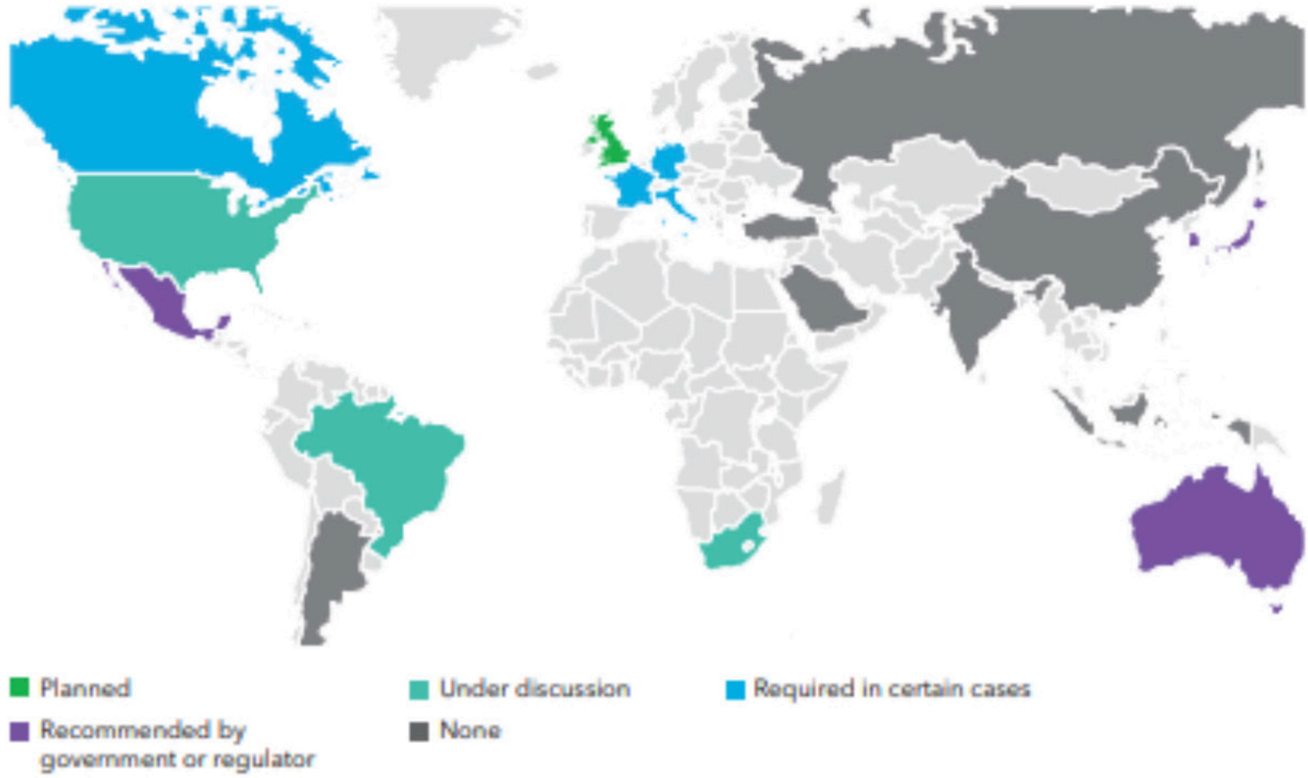


Source: OECD, International Energy Agency, Oil Change International, Overseas Development Institute. Note: Includes budget transfers, tax expenditure, public finance, investment by state-owned enterprises (SOE) and consumer-price support.

covered and regions. The EU ETS has become a well-regarded policy measure. Reforms for its fourth trading period (2021–30) will see greater emission reductions and higher carbon prices. Compared with previous compliance periods, the share of allowances allocated for free has shrunk considerably. Half of permits were auctioned over 2013–20, rising to at least 57% through 2021–30.

3. Making climate-risk disclosure mandatory: There are growing calls for companies to be obliged to report the climate risks they face. Making such disclosure mandatory should enable companies to prepare better for the physical effects of climate change and the implications of the shift to a low-carbon economy, and help investors to understand better and take account of those risks. Most G-20 governments have voiced support for voluntary reporting of climate risks. Indeed, the G-7 nations backed "moving towards" mandatory climate risk disclosure at their 2021 summit in June. But few have legislated it. The EU and the U.K. are the only governments that have enforced climate-risk policies to date. Their efforts have focused on assessing the environmental impacts of companies and investors, and evaluating and managing the effect of climate risks on performance. The Task Force on Climate-related Financial Disclosures (TCFD) is the most widely used disclosure framework, with over 2,300 corporate, financial and government supporters across 88 countries as of October, 2021. While largely voluntary, It has gained momentum as governments announce support, typically by requiring disclosure under certain circumstances, as is the case in Canada or in the EU. However, only the U.K. plans to enforce mandatory TCFD reporting for listed companies, starting in 2023. Despite the positive momentum, financial institutions still lack much of the data needed to assess fully climate-related risks associated with their investments. This puts the onus on regulators to enforce disclosure regulations focusing on physical assets and environmental data. The availability of such information, available in a standardized manner, is key to ensuring more accurate climate-risk assessments. It also alleviates the use of estimates that may paint an inaccurate picture of climate risks.

Figure 2: Mandatory TCFD reporting for financial market participants in G20 countries



Source: BloombergNEF

Financial markets are ramping up

While governments across the globe are finding ways to tackle climate change, financial market players are also entering the race and building on the momentum. According to the BloombergNEF 2H 2021 Sustainable Finance Outlook, $824.7 billion of sustainable debt was issued in the first half of 2021 (Figure 4), of which over 62% came from green bonds and loans.

In June 2021, total sustainable debt reached $3 trillion issued since its inception, and the most recent trillion dollars of issuance was achieved in just eight months compared to just under two years from the previous trillion dollars. This showcases the pace at which the market is developing.

A few key trends underpin the growth in the climate finance market in the first half of 2021.

More financials are pledging to achieve net-zero

In the last several years, we have witnessed an increase in net-zero commitments made by corporations and asset managers. This trend is now spreading across the wider financial community, with more banks pledging to achieve net-zero financed emissions, which come from their investment and lending portfolio. On April 21, 2021, some 43 banks joined the initial round of participants to the newly created Net-Zero Banking Alliance. The signatories, brought together by the UN Environment Programme, committed to move their lending and investment portfolios to net-zero financed emissions by 2050. This surge in net-zero commitments has propelled the voluntary carbon offset market into record territory in 2021, with four months still to go in the year.

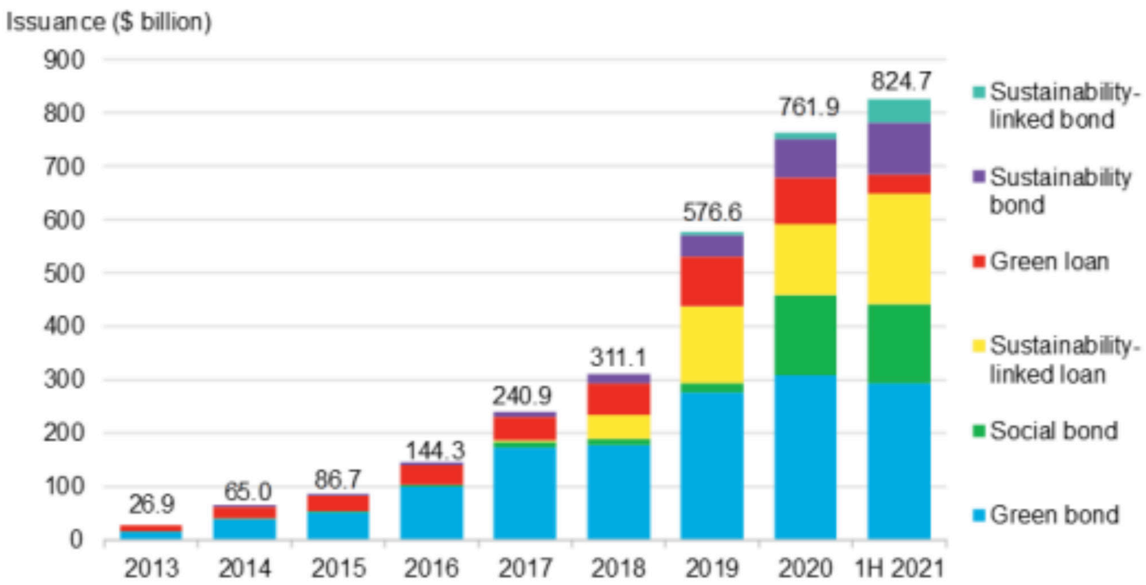
Growing interest–and skepticism–in ESG investment

Investor interest in ESG and sustainability has grown considerably in recent years, putting pressure on companies to change their behavior and fueling much of the growth seen in the sustainable debt market. One of the strongest indicators of this investment is net inflows of investment into ESG-focused exchange-traded funds (ETF). Through the first half of 2021, net inflows into ESG ETFs inflows totaled $62.5 billion, up from $26.9 billion at the same point in 2020. Net inflows hit a record $18.9 billion in January 2021.

This is proving that there is momentum for ESG investing, but there are also many signs that skepticism for such investing is on the rise, and some new debates have sparked controversies that could undermine further growth. Some financial players have recently questioned the narrative that ESG funds are outperforming their non-ESG equivalents, stating that growth in this market must be supported with the right incentives to help it become more robust, even when it means forfeiting profitability in the short term. Despite this and other concerns, the IShares ESG ETF has seen its market capitalization increase from just $1.5 billion at the start of 2020 to $17.8 billion on June 15, 2021, outperforming the U.S. S&P 500 index by five percentage points over that period.

2021 has been a crucial year for galvanizing government and corporate efforts to reduce greenhouse-gas emissions and tackle climate change. Support from developed to developing countries, and leadership from the former by taking swift action will be paramount in the road forward.

Figure 3: Sustainable debt annual issuance



Source: BloombergNEF, Bloomberg LP

WHAT ARE ASSET OWNERS SAYING ABOUT SUSTAINABLE INVESTMENT?

Risk management considerations fuel appetite, regulation is viewed as an enabler, and adoption is nearly universal

FTSE Russell

FTSE Russell's 2021 global asset owner survey results once again looks at the motivations, challenges, adoption and trends in sustainable investing. We explored the key drivers of sustainable investment adoption and shows an established commitment to sustainable investment across the globe, including a narrowing of the gap between evaluation and adoption levels reported by asset owners in traditionally first-moving Europe and slower-adopting North America. Beneath the global trend, the regional stories continue to evolve, however.

Sustainable investment has clearly matured to become one of the most high-profile, high-priority investment considerations for institutional asset owners across the world. More than eight in every ten (84%) of the institutional asset owners that took part in our research are either implementing or evaluating sustainability into their portfolios. It's notable though that just over a third (36%) of asset owners are motivated to capture associated investment returns from sustainable investing.

Managing risk considerations

Our research shows that asset owners that are implementing and evaluating sustainable investment are motivated by risk management.

Almost two-thirds (64%) of all asset owners say mitigating long-term investment risk is a key factor. There is a correlation between an investment institution's AUM and a heightened focus on risk: asset owners with assets greater than US$1 billion are more concerned about managing long-term risks than smaller institutions.

> Almost two-thirds (64%) of all asset owners are motivated to adopt sustainable investing to mitigate long-term investment risk.

Nearly half (49%) of asset owners in North America and 60% in EMEA implement sustainable investment strategies to avoid harming their institution's reputation.

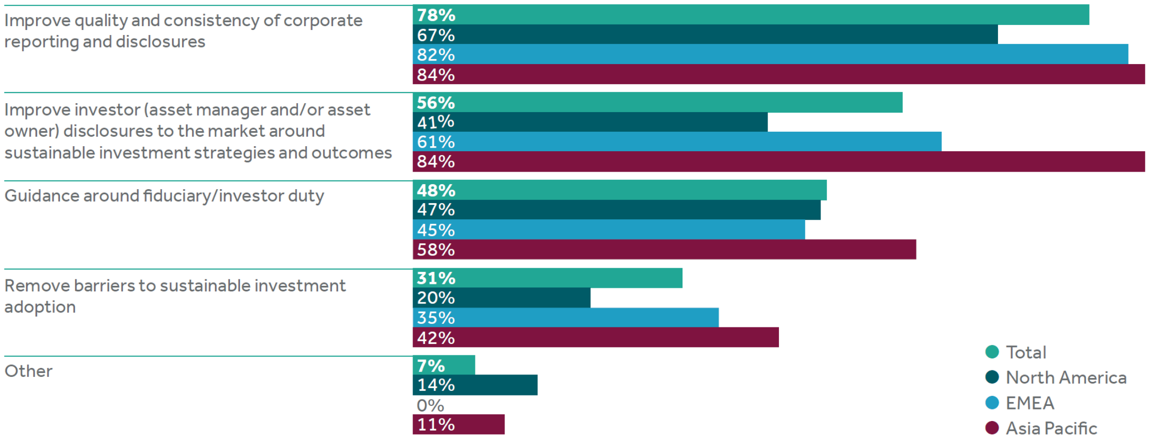
Climate and carbon are the leading priority focus areas for over two-thirds (67%) of asset owners. The Covid-19 pandemic has shone a light on social issues globally: 60% of all asset owners say that social themes are a sustainability priority focus.

Though asset owners in EMEA and Asia Pacific view climate/carbon as the number-one priority focus area, asset owners in North America cite social themes as their top priority, with climate/carbon coming in third.

Regulation headwinds and tailwinds

Asset owners worldwide have mixed views about how supportive regulation is in the financial services industry. However, in the context of sustainable investment, asset owners tend to view regulation as enabling greater adoption of sustainable investment. Overall, 82% of those we surveyed view sustainable investment regulation as enabling or potentially enabling depending on the specifics of the regulation, while only 15% view this regulation as exclusively constraining.

Figure 1: Ways in which sustainable regulation might be helpful



Multi-pick. In what ways might sustainable investment regulation be helpful?

Segment = Do not see sustainable investment/ESG regulation as exclusively a constraint

Sample size for Asia Pacific is 19, below the preferred threshold of 30.

Source: Sustainable Investment: 2021 global survey findings from asset owners, FTSE Russell

For those asset owners that agree with the potentially enabling benefits of regulation, over three-quarters (78%) say that regulations might improve the quality and consistency of corporate reporting and disclosures.

With the rise of corporate ESG and climate-reporting requirements, asset owners say that there are notable benefits to investors of improved reporting and standardization. More than six in ten (61%) say that the development of corporate ESG and climate-reporting requirements are beneficial to their institutions' investment approaches.

Implementing sustainable investment

Of the asset owners we surveyed, over eight in ten (84%) of them globally are implementing or evaluating sustainable investment considerations in 2021, up from a little over half (53%) in 2018. In North America, 39% were doing so in 2018 compared with 68% in 2021. And in EMEA, the total in 2018 was 72% and 97% in 2021.

Approximately nine in ten asset owners in Asia Pacific (88%), UK (90%) and Europe (97%) have strong appetite for sustainable investment, but less than half (45%) of US-based asset owners are currently implementing sustainable investment.

> 61% say that the development of corporate ESG and climate-reporting requirements are beneficial.

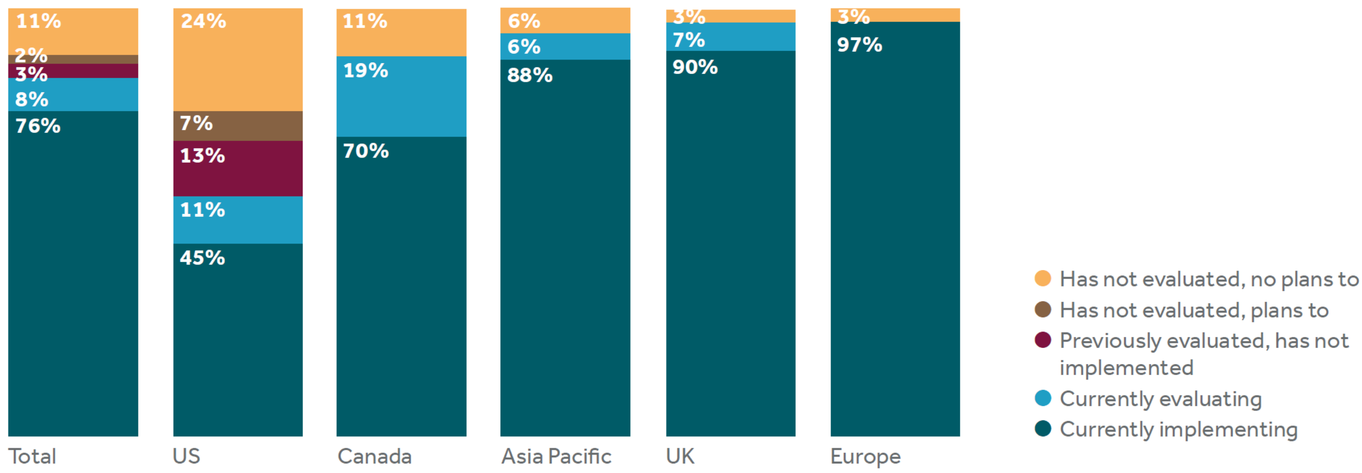
Nearly half (46%) have implemented sustainability considerations within their public equity portfolios and 35% have implemented sustainability considerations within fixed income.

In active public equity strategies, a large majority (74%) of asset owners that have implemented sustainable investment are following a broad integration approach. For active fixed income allocations, 57% are broadly integrating sustainable investment.

In passive strategies, the most popular approach when allocating to public equity is through shareholder engagement and voting (40%) followed by negative screens (37%).

Lack of standardization in ESG data, scores and ratings is the most commonly cited barrier to increased sustainable investment adoption (59%). Almost half (45%) of respondents express concern about the quality or consistency of corporate reporting and disclosures while 42% are concerned about availability of ESG data and the use of estimated data.

Figure 2: Sustainable investment adoption segments - 2021



Sample size for Canada is 27 and UK is 29, below the preferred threshold of 30.
Source: Sustainable Investment: 2021 global survey findings from asset owners, FTSE Russell

The continued growth and mainstreaming of sustainable investment have become a core consideration for asset owners of various sizes, underpinned by widespread adoption that has created a baseline of global acceptance. We can conclude that sustainable investment for asset owners today is indeed a maturing story – with a positive outlook.

> In EMEA, sustainable investment evaluation and adoption by asset owners is nearly universal.

INNOVATIONS IN SUSTAINABILITY ARE RESHAPING THE FUTURE OF PLASTIC

Balancing health and environmental concerns with the material's utility

Maria Elena Drew, *Director of Research, Responsible Investing, T. Rowe Price*

Over just a few short decades, plastic in its many forms has become a ubiquitous material in modern life. But its many uses and economic and practical benefits have not come without costs. The chemical composition, resource usage, and inherent durability of plastic are major sustainability and health problems that the world urgently needs to solve. Understanding the magnitude of the problem, both in terms of the environmental impact, as well as concerns relating to human health, is crucial. Yet, solutions also need to balance the utility of the material. Plastic inextricably serves modern industries and benefits consumers globally. Paradoxically, it also remains the best solution to other sustainability-related problems, such as reducing food waste, lowering packaging weight, enabling better hygiene, and improving the life span of building materials.

An Overview of the Plastic Problem

Plastic use has grown rapidly since the 1970s as consumers and industry have capitalized on the material's key attributes—malleable, lightweight, durable, and cheap. However, the production and use of plastic has long underestimated the core problem of its end-of-life burden. Most plastics have a very short life span, often less than one year, with up to 95% of plastic packaging material lost to the economy after its first use (Ellen MacArthur Foundation). Nearly 13 million tons of plastic waste finds its way into the world's oceans each year, while its complex nature and low margins for recycling see most single-use plastic waste buried in a landfill or incinerated. Plastics pollute vital ecosystems and infiltrate human food chains. Research by the World Wildlife Fund and University of Newcastle in Australia in 2019 stated that the average person consumes about five grams of plastic per week (the equivalent of a credit card).

Taking up to 450 years to biodegrade, plastics' environmental impact is therefore significant when not disposed of properly. It's easy to understand how plastic packaging has become the scourge of the circular, reusable economy—placing it squarely in the crosshairs of increasingly environmentally conscious consumers and government regulators alike.

Catalysts of Change—Governments and Consumers Compel a Rethink

Unsurprisingly, regulators and consumers are demanding action. Many governments around the world are implementing new regulations and committing to actionable time frames to reduce the impact of single-use plastics. This includes some of the world's largest producers and consumers of plastic products. Regulatory action typically targets the reduction of single-use plastics and promotes increased recycling or innovation toward alternative solutions.

Consumers are another powerful impetus for change. Half of the Household and Personal Care (HPC) companies in the MSCI All Countries World Index (ACWI), for example, have indicated that consumer concern about the environmental footprint of their purchases has been a motivation to improve product sustainability. According to a Kantar Survey,[1] global consumers rank plastic waste as their second biggest concern, after climate change (survey of over 80,000 individuals in 19 countries). Kantar also found that 20% of global consumers in

1 Kantar "Who Cares, Who Does" Survey, as of September 2020

2020 were actively engaged in reducing their contribution to plastic waste, an increase of 4% from 2019.

The Industry Response—How Innovation Is Reshaping the Future of Plastics

Given the various regulatory, consumer, and corporate pressures, environmental, social, and governance considerations are set to significantly reshape the packaging industry in developed countries over the coming years. Single-use plastics are a principal area of focus, directly challenged by alternative substitutes (paper, aluminium, glass) as well as innovative new materials like bioplastics.

Since plastic offers many benefits and widespread practical applications, a focus on simple elimination as a response to regulatory and consumer pressures is unrealistic. A range of solutions are in play—and our research seeks to identify how companies are working to adapt to the risks and opportunities associated with the need for change. Within the HPC sector, historically a significant producer and user of single-use plastics (particularly for packaging), we have identified three key classifications of industry response—with innovations that focus on elimination, reuse, or improved circulation.

A Radical Reshaping Is Underway

How the world deals with the problem of plastic waste is of increasing concern for society, companies, our clients—and our investment teams. The imperative has never been greater. The key challenge is for industry to devise solutions to address the sustainability problem while balancing the practicality of plastic across vast areas of modern industry and society.

We expect the single-use plastics space to be radically reshaped in the coming decade as companies increasingly develop and use alternative materials (paper, aluminum, glass, etc.); innovate toward better, less-damaging plastics (bioplastics, etc.); and find ways to use less packaging material altogether. At a company level, many businesses are recognizing this imperative for change and are adjusting to a new and more sustainable paradigm. Industries and companies that address regulatory and consumer pressures through innovation should be best placed to prosper.

As investment professionals, we seek to integrate these dynamics into our analysis, working to evaluate how they are influencing company behavior, and what actions are being taken to mitigate risks or create opportunities. In doing so, we hope to identify those companies that are best placed to adapt to the necessity for long-term, sustainable solutions to plastic use.

To read the article in full, click here.

> 95% Estimated percentage of plastic packaging material lost to the economy after a single use.

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